

# Poids de Mayer pour tout les graphes 2-connexes de taille au plus 7, liste des degrés, polynôme d'Ehrhart, nombre d'arbres couvrants et nombre d'étiquetages associé au graphe

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## Résumé

Nous présentons ici tous les graphes 2-connexes  $c$  de taille au plus 7, la liste des degrés du graphe  $c$ , le polynôme d'Ehrhart associé au graphe  $c$  en base  $n^i$ , le nombre d'étiquetages du graphe  $c$ , le nombre d'arbres couvrants du graphe  $c$ , le polynôme d'Ehrhart associé au graphe  $c$  en base  $\binom{n}{i}$  et le poids de Mayer du graphe  $c$ , soit  $w_M(c)$ . Pour réaliser ce tableau, on a utilisé le polynôme d'Ehrhart pour le calcul des poids de Mayer des graphes 2-connexes, des procédures Maple pour générer tous les graphes 2-connexes de taille au plus 7 ainsi que les autres paramètres.

Légende:

Numéro	liste des degrés de $c$	polynôme d'Ehrhart de $c$ en base $n^i$	nombre d'étiquetages de $c$	nombre d'arbres couvrants de $c$
graphhe $c$		polynôme d'Ehrhart de $c$ en base $\binom{n}{i}$	$ w_M(c) $	$ w_M(c)  \times (n - 1)!$

Avec 2 sommets:

2.1.1	(1,1)	
	$\begin{array}{c cc} 2n+1 & 1 & 1 \\ \hline 1\binom{n}{0} + 2\binom{n}{1} & 2 & 2 \end{array}$	

Avec 3 sommets:

3.3.1	(2,2,2)	
	$\begin{array}{c cc} 3n^2 + 3n + 1 & 1 & 3 \\ \hline 1\binom{n}{0} + 6\binom{n}{1} + 6\binom{n}{2} & 3 & 6 \end{array}$	

Avec 4 sommets:

4.4.1	(2,2,2,2)	
	$\begin{array}{c cc} \frac{16}{3}n^3 + 8n^2 + \frac{14}{3}n + 1 & 3 & 4 \\ \hline 1\binom{n}{0} + 18\binom{n}{1} + 48\binom{n}{2} + 32\binom{n}{3} & \frac{16}{3} & 32 \end{array}$	
4.5.1	(3,3,2,2)	
	$\begin{array}{c cc} \frac{14}{3}n^3 + 7n^2 + \frac{13}{3}n + 1 & 6 & 8 \\ \hline 1\binom{n}{0} + 16\binom{n}{1} + 42\binom{n}{2} + 28\binom{n}{3} & \frac{14}{3} & 28 \end{array}$	

4.6.1	$(3,3,3,3)$			
	$\frac{4n^3 + 6n^2 + 4n + 1}{1\binom{n}{0} + 14\binom{n}{1} + 36\binom{n}{2} + 24\binom{n}{3}} \quad \begin{array}{c cc} 1 & 16 \\ \hline 4 & 24 \end{array}$			

Avec 5 sommets:

5.5.1	$(2,2,2,2,2)$			
	$\frac{\frac{115}{12}n^4 + \frac{115}{6}n^3 + \frac{185}{12}n^2 + \frac{35}{6}n + 1}{1\binom{n}{0} + 50\binom{n}{1} + 280\binom{n}{2} + 460\binom{n}{3} + 230\binom{n}{4}} \quad \begin{array}{c cc} 12 & 5 \\ \hline \frac{115}{12} & 230 \end{array}$			

5.6.1	$(3,3,2,2,2)$			
	$\frac{\frac{49}{6}n^4 + \frac{49}{3}n^3 + \frac{83}{6}n^2 + \frac{17}{3}n + 1}{1\binom{n}{0} + 44\binom{n}{1} + 240\binom{n}{2} + 392\binom{n}{3} + 196\binom{n}{4}} \quad \begin{array}{c cc} 60 & 11 \\ \hline \frac{49}{6} & 196 \end{array}$			

5.6.2	$(3,3,2,2,2)$			
	$\frac{8n^4 + 16n^3 + 14n^2 + 6n + 1}{1\binom{n}{0} + 44\binom{n}{1} + 236\binom{n}{2} + 384\binom{n}{3} + 192\binom{n}{4}} \quad \begin{array}{c cc} 10 & 12 \\ \hline 8 & 192 \end{array}$			

5.7.1	$(3,3,3,3,2)$			
	$\frac{\frac{41}{6}n^4 + \frac{41}{3}n^3 + \frac{73}{6}n^2 + \frac{16}{3}n + 1}{1\binom{n}{0} + 38\binom{n}{1} + 202\binom{n}{2} + 328\binom{n}{3} + 164\binom{n}{4}} \quad \begin{array}{c cc} 30 & 24 \\ \hline \frac{41}{6} & 164 \end{array}$			

5.7.2	$(4,3,3,2,2)$			
	$\frac{\frac{29}{4}n^4 + \frac{29}{2}n^3 + \frac{51}{4}n^2 + \frac{11}{2}n + 1}{1\binom{n}{0} + 40\binom{n}{1} + 214\binom{n}{2} + 348\binom{n}{3} + 174\binom{n}{4}} \quad \begin{array}{c cc} 60 & 21 \\ \hline \frac{29}{4} & 174 \end{array}$			

5.7.3	$(4,4,2,2,2)$			
	$\frac{\frac{15}{2}n^4 + 15n^3 + \frac{27}{2}n^2 + 6n + 1}{1\binom{n}{0} + 42\binom{n}{1} + 222\binom{n}{2} + 360\binom{n}{3} + 180\binom{n}{4}} \quad \begin{array}{c cc} 10 & 20 \\ \hline \frac{15}{2} & 180 \end{array}$			

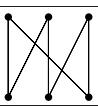
5.8.1	$(4,3,3,3,3)$			
	$\frac{6n^4 + 12n^3 + 11n^2 + 5n + 1}{1\binom{n}{0} + 34\binom{n}{1} + 178\binom{n}{2} + 288\binom{n}{3} + 144\binom{n}{4}} \quad \begin{array}{c cc} 15 & 45 \\ \hline 6 & 144 \end{array}$			

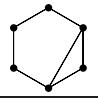
5.8.2	$(4,4,3,3,2)$			
	$\frac{\frac{19}{3}n^4 + \frac{38}{3}n^3 + \frac{35}{3}n^2 + \frac{16}{3}n + 1}{1\binom{n}{0} + 36\binom{n}{1} + 188\binom{n}{2} + 304\binom{n}{3} + 152\binom{n}{4}} \quad \begin{array}{c cc} 30 & 40 \\ \hline \frac{19}{3} & 152 \end{array}$			

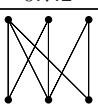
5.9.1	$(4,4,4,3,3)$			
	$\frac{\frac{11}{2}n^4 + 11n^3 + \frac{21}{2}n^2 + 5n + 1}{1\binom{n}{0} + 32\binom{n}{1} + 164\binom{n}{2} + 264\binom{n}{3} + 132\binom{n}{4}} \quad \begin{array}{c cc} 10 & 75 \\ \hline \frac{11}{2} & 132 \end{array}$			

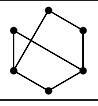
5.10.1	$(4,4,4,4,4)$		
	$\frac{5n^4 + 10n^3 + 10n^2 + 5n + 1}{1\binom{n}{0} + 30\binom{n}{1} + 150\binom{n}{2} + 240\binom{n}{3} + 120\binom{n}{4}}$	$1 \mid 5$	125 120

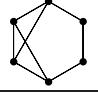
Avec 6 sommets:

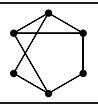
6.6.1	$(2,2,2,2,2,2)$		
	$\frac{\frac{88}{5}n^5 + 44n^4 + 46n^3 + 25n^2 + \frac{37}{5}n + 1}{1\binom{n}{0} + 140\binom{n}{1} + 1470\binom{n}{2} + 4500\binom{n}{3} + 5280\binom{n}{4} + 2112\binom{n}{5}}$	$60 \mid \frac{88}{5}$	6 2112

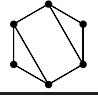
6.7.1	$(3,3,2,2,2,2)$		
	$\frac{\frac{439}{30}n^5 + \frac{439}{12}n^4 + \frac{118}{3}n^3 + \frac{269}{12}n^2 + \frac{211}{30}n + 1}{1\binom{n}{0} + 120\binom{n}{1} + 1232\binom{n}{2} + 3748\binom{n}{3} + 4390\binom{n}{4} + 1756\binom{n}{5}}$	$360 \mid \frac{439}{30}$	14 1756

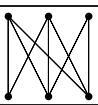
6.7.2	$(3,3,2,2,2,2)$		
	$\frac{\frac{72}{5}n^5 + 36n^4 + \frac{118}{3}n^3 + 23n^2 + \frac{109}{15}n + 1}{1\binom{n}{0} + 120\binom{n}{1} + 1218\binom{n}{2} + 3692\binom{n}{3} + 4320\binom{n}{4} + 1728\binom{n}{5}}$	$180 \mid \frac{72}{5}$	15 1728

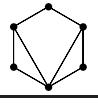
6.7.3	$(3,3,2,2,2,2)$		
	$\frac{\frac{419}{30}n^5 + \frac{419}{12}n^4 + 38n^3 + \frac{265}{12}n^2 + \frac{211}{30}n + 1}{1\binom{n}{0} + 116\binom{n}{1} + 1180\binom{n}{2} + 3580\binom{n}{3} + 4190\binom{n}{4} + 1676\binom{n}{5}}$	$180 \mid \frac{419}{30}$	16 1676

6.8.1	$(3,3,3,3,2,2)$		
	$\frac{\frac{361}{30}n^5 + \frac{361}{12}n^4 + \frac{100}{3}n^3 + \frac{239}{12}n^2 + \frac{199}{30}n + 1}{1\binom{n}{0} + 102\binom{n}{1} + 1022\binom{n}{2} + 3088\binom{n}{3} + 3610\binom{n}{4} + 1444\binom{n}{5}}$	$180 \mid \frac{361}{30}$	32 1444

6.8.2	$(3,3,3,3,2,2)$		
	$\frac{\frac{117}{10}n^5 + \frac{117}{4}n^4 + \frac{98}{3}n^3 + \frac{79}{4}n^2 + \frac{199}{30}n + 1}{1\binom{n}{0} + 100\binom{n}{1} + 996\binom{n}{2} + 3004\binom{n}{3} + 3510\binom{n}{4} + 1404\binom{n}{5}}$	$360 \mid \frac{117}{10}$	35 1404

6.8.3	$(3,3,3,3,2,2)$		
	$\frac{\frac{188}{15}n^5 + \frac{94}{3}n^4 + \frac{104}{3}n^3 + \frac{62}{3}n^2 + \frac{34}{5}n + 1}{1\binom{n}{0} + 106\binom{n}{1} + 1064\binom{n}{2} + 3216\binom{n}{3} + 3760\binom{n}{4} + 1504\binom{n}{5}}$	$180 \mid \frac{188}{15}$	30 1504

6.8.4	$(3,3,3,3,2,2)$		
	$\frac{\frac{176}{15}n^5 + \frac{88}{3}n^4 + \frac{100}{3}n^3 + \frac{62}{3}n^2 + \frac{104}{15}n + 1}{1\binom{n}{0} + 102\binom{n}{1} + 1004\binom{n}{2} + 3016\binom{n}{3} + 3520\binom{n}{4} + 1408\binom{n}{5}}$	$90 \mid \frac{176}{15}$	36 1408

6.8.5	$(4,3,3,2,2,2)$		
	$\frac{\frac{188}{15}n^5 + \frac{94}{3}n^4 + \frac{104}{3}n^3 + \frac{62}{3}n^2 + \frac{34}{5}n + 1}{1\binom{n}{0} + 106\binom{n}{1} + 1064\binom{n}{2} + 3216\binom{n}{3} + 3760\binom{n}{4} + 1504\binom{n}{5}}$	$360 \mid \frac{188}{15}$	30 1504

6.8.6	(4,3,3,2,2,2)
	$\frac{127}{10} n^5 + \frac{127}{4} n^4 + \frac{106}{3} n^3 + \frac{85}{4} n^2 + \frac{209}{30} n + 1$ $1\binom{n}{0} + 108\binom{n}{1} + 1080\binom{n}{2} + 3260\binom{n}{3} + 3810\binom{n}{4} + 1524\binom{n}{5}$
6.8.7	(4,4,2,2,2,2)
	$\frac{194}{15} n^5 + \frac{97}{3} n^4 + 36 n^3 + \frac{65}{3} n^2 + \frac{106}{15} n + 1$ $1\binom{n}{0} + 110\binom{n}{1} + 1100\binom{n}{2} + 3320\binom{n}{3} + 3880\binom{n}{4} + 1552\binom{n}{5}$
6.8.8	(4,3,3,2,2,2)
	$\frac{37}{3} n^5 + \frac{185}{6} n^4 + \frac{104}{3} n^3 + \frac{127}{6} n^2 + 7n + 1$ $1\binom{n}{0} + 106\binom{n}{1} + 1052\binom{n}{2} + 3168\binom{n}{3} + 3700\binom{n}{4} + 1480\binom{n}{5}$
6.8.9	(4,4,2,2,2,2)
	$\frac{64}{5} n^5 + 32 n^4 + \frac{112}{3} n^3 + 24 n^2 + \frac{118}{15} n + 1$ $1\binom{n}{0} + 114\binom{n}{1} + 1104\binom{n}{2} + 3296\binom{n}{3} + 3840\binom{n}{4} + 1536\binom{n}{5}$
6.9.1	(3,3,3,3,3,3)
	$\frac{49}{5} n^5 + \frac{49}{2} n^4 + 28 n^3 + \frac{35}{2} n^2 + \frac{31}{5} n + 1$ $1\binom{n}{0} + 86\binom{n}{1} + 840\binom{n}{2} + 2520\binom{n}{3} + 2940\binom{n}{4} + 1176\binom{n}{5}$
6.9.2	(4,3,3,3,3,2)
	$\frac{103}{10} n^5 + \frac{103}{4} n^4 + \frac{88}{3} n^3 + \frac{73}{4} n^2 + \frac{191}{30} n + 1$ $1\binom{n}{0} + 90\binom{n}{1} + 882\binom{n}{2} + 2648\binom{n}{3} + 3090\binom{n}{4} + 1236\binom{n}{5}$
6.9.3	(4,4,3,3,2,2)
	$11 n^5 + \frac{55}{2} n^4 + \frac{94}{3} n^3 + \frac{39}{2} n^2 + \frac{20}{3} n + 1$ $1\binom{n}{0} + 96\binom{n}{1} + 942\binom{n}{2} + 2828\binom{n}{3} + 3300\binom{n}{4} + 1320\binom{n}{5}$
6.9.4	(4,4,3,3,2,2)
	$\frac{169}{15} n^5 + \frac{169}{6} n^4 + 32 n^3 + \frac{119}{6} n^2 + \frac{101}{15} n + 1$ $1\binom{n}{0} + 98\binom{n}{1} + 964\binom{n}{2} + 2896\binom{n}{3} + 3380\binom{n}{4} + 1352\binom{n}{5}$
6.9.5	(4,3,3,3,3,2)
	$\frac{158}{15} n^5 + \frac{79}{3} n^4 + 30 n^3 + \frac{56}{3} n^2 + \frac{97}{15} n + 1$ $1\binom{n}{0} + 92\binom{n}{1} + 902\binom{n}{2} + 2708\binom{n}{3} + 3160\binom{n}{4} + 1264\binom{n}{5}$
6.9.6	(3,3,3,3,3,3)
	$\frac{48}{5} n^5 + 24 n^4 + 28 n^3 + 18 n^2 + \frac{32}{5} n + 1$ $1\binom{n}{0} + 86\binom{n}{1} + 828\binom{n}{2} + 2472\binom{n}{3} + 2880\binom{n}{4} + 1152\binom{n}{5}$
6.9.7	(4,4,4,2,2,2)
	$\frac{113}{10} n^5 + \frac{113}{4} n^4 + 32 n^3 + \frac{79}{4} n^2 + \frac{67}{10} n + 1$ $1\binom{n}{0} + 98\binom{n}{1} + 966\binom{n}{2} + 2904\binom{n}{3} + 3390\binom{n}{4} + 1356\binom{n}{5}$

6.9.8	(4,4,3,3,2,2)		
	$\frac{161}{15}n^5 + \frac{161}{6}n^4 + \frac{92}{3}n^3 + \frac{115}{6}n^2 + \frac{33}{5}n + 1$ $1\binom{n}{0} + 94\binom{n}{1} + 920\binom{n}{2} + 2760\binom{n}{3} + 3220\binom{n}{4} + 1288\binom{n}{5}$	720	61 $\frac{161}{15}$
6.9.9	(4,4,3,3,2,2)		
	$\frac{163}{15}n^5 + \frac{163}{6}n^4 + \frac{94}{3}n^3 + \frac{119}{6}n^2 + \frac{34}{5}n + 1$ $1\binom{n}{0} + 96\binom{n}{1} + 934\binom{n}{2} + 2796\binom{n}{3} + 3260\binom{n}{4} + 1304\binom{n}{5}$	180	60 $\frac{163}{15}$
6.9.10	(4,3,3,3,3,2)		
	$\frac{51}{5}n^5 + \frac{51}{2}n^4 + \frac{88}{3}n^3 + \frac{37}{2}n^2 + \frac{97}{15}n + 1$ $1\binom{n}{0} + 90\binom{n}{1} + 876\binom{n}{2} + 2624\binom{n}{3} + 3060\binom{n}{4} + 1224\binom{n}{5}$	360	69 $\frac{51}{5}$
6.9.11	(5,3,3,3,2,2)		
	$\frac{169}{15}n^5 + \frac{169}{6}n^4 + 32n^3 + \frac{119}{6}n^2 + \frac{101}{15}n + 1$ $1\binom{n}{0} + 98\binom{n}{1} + 964\binom{n}{2} + 2896\binom{n}{3} + 3380\binom{n}{4} + 1352\binom{n}{5}$	360	55 $\frac{169}{15}$
6.9.12	(4,4,3,3,2,2)		
	$\frac{161}{15}n^5 + \frac{161}{6}n^4 + \frac{94}{3}n^3 + \frac{121}{6}n^2 + \frac{104}{15}n + 1$ $1\binom{n}{0} + 96\binom{n}{1} + 926\binom{n}{2} + 2764\binom{n}{3} + 3220\binom{n}{4} + 1288\binom{n}{5}$	90	64 $\frac{161}{15}$
6.9.13	(5,4,3,2,2,2)		
	$\frac{349}{30}n^5 + \frac{349}{12}n^4 + \frac{100}{3}n^3 + \frac{251}{12}n^2 + \frac{211}{30}n + 1$ $1\binom{n}{0} + 102\binom{n}{1} + 998\binom{n}{2} + 2992\binom{n}{3} + 3490\binom{n}{4} + 1396\binom{n}{5}$	360	52 $\frac{349}{30}$
6.9.14	(5,5,2,2,2,2)		
	$\frac{62}{5}n^5 + 31n^4 + \frac{110}{3}n^3 + 24n^2 + \frac{119}{15}n + 1$ $1\binom{n}{0} + 112\binom{n}{1} + 1074\binom{n}{2} + 3196\binom{n}{3} + 3720\binom{n}{4} + 1488\binom{n}{5}$	15	48 $\frac{62}{5}$
6.10.1	(4,4,4,4,2,2)		
	$10n^5 + 25n^4 + \frac{88}{3}n^3 + 19n^2 + \frac{20}{3}n + 1$ $1\binom{n}{0} + 90\binom{n}{1} + 864\binom{n}{2} + 2576\binom{n}{3} + 3000\binom{n}{4} + 1200\binom{n}{5}$	90	100 10
6.10.2	(4,4,4,3,3,2)		
	$\frac{28}{3}n^5 + \frac{70}{3}n^4 + \frac{82}{3}n^3 + \frac{53}{3}n^2 + \frac{19}{3}n + 1$ $1\binom{n}{0} + 84\binom{n}{1} + 806\binom{n}{2} + 2404\binom{n}{3} + 2800\binom{n}{4} + 1120\binom{n}{5}$	360	115 $\frac{28}{3}$
6.10.3	(4,4,4,3,3,2)		
	$\frac{47}{5}n^5 + \frac{47}{2}n^4 + \frac{82}{3}n^3 + \frac{35}{2}n^2 + \frac{94}{15}n + 1$ $1\binom{n}{0} + 84\binom{n}{1} + 810\binom{n}{2} + 2420\binom{n}{3} + 2820\binom{n}{4} + 1128\binom{n}{5}$	360	114 $\frac{47}{5}$
6.10.4	(4,4,3,3,3,3)		
	$\frac{89}{10}n^5 + \frac{89}{4}n^4 + 26n^3 + \frac{67}{4}n^2 + \frac{61}{10}n + 1$ $1\binom{n}{0} + 80\binom{n}{1} + 768\binom{n}{2} + 2292\binom{n}{3} + 2670\binom{n}{4} + 1068\binom{n}{5}$	360	130 $\frac{89}{10}$

6.10.5	(5,3,3,3,3,3)	
	$\frac{55}{6} n^5 + \frac{275}{12} n^4 + \frac{80}{3} n^3 + \frac{205}{12} n^2 + \frac{37}{6} n + 1$ $1 \binom{n}{0} + 82 \binom{n}{1} + 790 \binom{n}{2} + 2360 \binom{n}{3} + 2750 \binom{n}{4} + 1100 \binom{n}{5}$	$72 \quad \frac{55}{6}$ $121 \quad 1100$
6.10.6	(4,4,3,3,3,3)	
	$\frac{136}{15} n^5 + \frac{68}{3} n^4 + \frac{80}{3} n^3 + \frac{52}{3} n^2 + \frac{94}{15} n + 1$ $1 \binom{n}{0} + 82 \binom{n}{1} + 784 \binom{n}{2} + 2336 \binom{n}{3} + 2720 \binom{n}{4} + 1088 \binom{n}{5}$	$45 \quad \frac{136}{15}$ $128 \quad 1088$
6.10.7	(5,4,3,3,3,2)	
	$\frac{59}{6} n^5 + \frac{295}{12} n^4 + \frac{86}{3} n^3 + \frac{221}{12} n^2 + \frac{13}{2} n + 1$ $1 \binom{n}{0} + 88 \binom{n}{1} + 848 \binom{n}{2} + 2532 \binom{n}{3} + 2950 \binom{n}{4} + 1180 \binom{n}{5}$	$360 \quad \frac{59}{6}$ $104 \quad 1180$
6.10.8	(4,4,4,3,3,2)	
	$\frac{139}{15} n^5 + \frac{139}{6} n^4 + \frac{82}{3} n^3 + \frac{107}{6} n^2 + \frac{32}{5} n + 1$ $1 \binom{n}{0} + 84 \binom{n}{1} + 802 \binom{n}{2} + 2388 \binom{n}{3} + 2780 \binom{n}{4} + 1112 \binom{n}{5}$	$180 \quad \frac{139}{15}$ $120 \quad 1112$
6.10.9	(4,4,3,3,3,3)	
	$\frac{44}{5} n^5 + 22 n^4 + 26 n^3 + 17 n^2 + \frac{31}{5} n + 1$ $1 \binom{n}{0} + 80 \binom{n}{1} + 762 \binom{n}{2} + 2268 \binom{n}{3} + 2640 \binom{n}{4} + 1056 \binom{n}{5}$	$60 \quad \frac{44}{5}$ $135 \quad 1056$
6.10.10	(5,4,4,3,2,2)	
	$\frac{301}{30} n^5 + \frac{301}{12} n^4 + \frac{88}{3} n^3 + \frac{227}{12} n^2 + \frac{199}{30} n + 1$ $1 \binom{n}{0} + 90 \binom{n}{1} + 866 \binom{n}{2} + 2584 \binom{n}{3} + 3010 \binom{n}{4} + 1204 \binom{n}{5}$	$360 \quad \frac{301}{30}$ $99 \quad 1204$
6.10.11	(5,4,3,3,3,2)	
	$\frac{287}{30} n^5 + \frac{287}{12} n^4 + 28 n^3 + \frac{217}{12} n^2 + \frac{193}{30} n + 1$ $1 \binom{n}{0} + 86 \binom{n}{1} + 826 \binom{n}{2} + 2464 \binom{n}{3} + 2870 \binom{n}{4} + 1148 \binom{n}{5}$	$360 \quad \frac{287}{30}$ $111 \quad 1148$
6.10.12	(5,5,3,3,2,2)	
	$\frac{31}{3} n^5 + \frac{155}{6} n^4 + \frac{92}{3} n^3 + \frac{121}{6} n^2 + 7 n + 1$ $1 \binom{n}{0} + 94 \binom{n}{1} + 896 \binom{n}{2} + 2664 \binom{n}{3} + 3100 \binom{n}{4} + 1240 \binom{n}{5}$	$90 \quad \frac{31}{3}$ $96 \quad 1240$
6.11.1	(4,4,4,4,3,3)	
	$8 n^5 + 20 n^4 + 24 n^3 + 16 n^2 + 6 n + 1$ $1 \binom{n}{0} + 74 \binom{n}{1} + 696 \binom{n}{2} + 2064 \binom{n}{3} + 2400 \binom{n}{4} + 960 \binom{n}{5}$	$90 \quad 8$ $225 \quad 960$
6.11.2	(4,4,4,4,4,2)	
	$\frac{42}{5} n^5 + 21 n^4 + \frac{76}{3} n^3 + 17 n^2 + \frac{94}{15} n + 1$ $1 \binom{n}{0} + 78 \binom{n}{1} + 732 \binom{n}{2} + 2168 \binom{n}{3} + 2520 \binom{n}{4} + 1008 \binom{n}{5}$	$60 \quad \frac{42}{5}$ $200 \quad 1008$
6.11.3	(4,4,4,4,3,3)	
	$\frac{241}{30} n^5 + \frac{241}{12} n^4 + 24 n^3 + \frac{191}{12} n^2 + \frac{179}{30} n + 1$ $1 \binom{n}{0} + 74 \binom{n}{1} + 698 \binom{n}{2} + 2072 \binom{n}{3} + 2410 \binom{n}{4} + 964 \binom{n}{5}$	$180 \quad \frac{241}{30}$ $224 \quad 964$

6.11.4	(5,4,4,4,3,2)		
	$\frac{87}{10} n^5 + \frac{87}{4} n^4 + 26 n^3 + \frac{69}{4} n^2 + \frac{63}{10} n + 1$ $1 \binom{n}{0} + 80 \binom{n}{1} + 756 \binom{n}{2} + 2244 \binom{n}{3} + 2610 \binom{n}{4} + 1044 \binom{n}{5}$	360	185 $\frac{87}{10}$
6.11.5	(5,4,4,3,3,3)		
	$\frac{124}{15} n^5 + \frac{62}{3} n^4 + \frac{74}{3} n^3 + \frac{49}{3} n^2 + \frac{91}{15} n + 1$ $1 \binom{n}{0} + 76 \binom{n}{1} + 718 \binom{n}{2} + 2132 \binom{n}{3} + 2480 \binom{n}{4} + 992 \binom{n}{5}$	360	209 $\frac{124}{15}$
6.11.6	(5,5,3,3,3,3)		
	$\frac{26}{3} n^5 + \frac{65}{3} n^4 + 26 n^3 + \frac{52}{3} n^2 + \frac{19}{3} n + 1$ $1 \binom{n}{0} + 80 \binom{n}{1} + 754 \binom{n}{2} + 2236 \binom{n}{3} + 2600 \binom{n}{4} + 1040 \binom{n}{5}$	45 $\frac{26}{3}$	192 1040
6.11.7	(5,4,4,3,3,3)		
	$\frac{41}{5} n^5 + \frac{41}{2} n^4 + \frac{74}{3} n^3 + \frac{33}{2} n^2 + \frac{92}{15} n + 1$ $1 \binom{n}{0} + 76 \binom{n}{1} + 714 \binom{n}{2} + 2116 \binom{n}{3} + 2460 \binom{n}{4} + 984 \binom{n}{5}$	60 $\frac{41}{5}$	216 984
6.11.8	(5,5,4,3,3,2)		
	$\frac{133}{15} n^5 + \frac{133}{6} n^4 + \frac{80}{3} n^3 + \frac{107}{6} n^2 + \frac{97}{15} n + 1$ $1 \binom{n}{0} + 82 \binom{n}{1} + 772 \binom{n}{2} + 2288 \binom{n}{3} + 2660 \binom{n}{4} + 1064 \binom{n}{5}$	180 $\frac{133}{15}$	180 1064
6.12.1	(4,4,4,4,4,4)		
	$\frac{36}{5} n^5 + 18 n^4 + 22 n^3 + 15 n^2 + \frac{29}{5} n + 1$ $1 \binom{n}{0} + 68 \binom{n}{1} + 630 \binom{n}{2} + 1860 \binom{n}{3} + 2160 \binom{n}{4} + 864 \binom{n}{5}$	15 $\frac{36}{5}$	384 864
6.12.2	(5,4,4,4,4,3)		
	$\frac{37}{5} n^5 + \frac{37}{2} n^4 + \frac{68}{3} n^3 + \frac{31}{2} n^2 + \frac{89}{15} n + 1$ $1 \binom{n}{0} + 70 \binom{n}{1} + 648 \binom{n}{2} + 1912 \binom{n}{3} + 2220 \binom{n}{4} + 888 \binom{n}{5}$	180 $\frac{37}{5}$	360 888
6.12.3	(5,5,4,4,4,2)		
	$8 n^5 + 20 n^4 + \frac{74}{3} n^3 + 17 n^2 + \frac{19}{3} n + 1$ $1 \binom{n}{0} + 76 \binom{n}{1} + 702 \binom{n}{2} + 2068 \binom{n}{3} + 2400 \binom{n}{4} + 960 \binom{n}{5}$	60 8	300 960
6.12.4	(5,5,4,4,3,3)		
	$\frac{229}{30} n^5 + \frac{229}{12} n^4 + \frac{70}{3} n^3 + \frac{191}{12} n^2 + \frac{181}{30} n + 1$ $1 \binom{n}{0} + 72 \binom{n}{1} + 668 \binom{n}{2} + 1972 \binom{n}{3} + 2290 \binom{n}{4} + 916 \binom{n}{5}$	180 $\frac{229}{30}$	336 916
6.12.5	(5,5,5,3,3,3)		
	$\frac{39}{5} n^5 + \frac{39}{2} n^4 + 24 n^3 + \frac{33}{2} n^2 + \frac{31}{5} n + 1$ $1 \binom{n}{0} + 74 \binom{n}{1} + 684 \binom{n}{2} + 2016 \binom{n}{3} + 2340 \binom{n}{4} + 936 \binom{n}{5}$	20 $\frac{39}{5}$	324 936
6.13.1	(5,5,4,4,4,4)		
	$\frac{34}{5} n^5 + 17 n^4 + \frac{64}{3} n^3 + 15 n^2 + \frac{88}{15} n + 1$ $1 \binom{n}{0} + 66 \binom{n}{1} + 600 \binom{n}{2} + 1760 \binom{n}{3} + 2040 \binom{n}{4} + 816 \binom{n}{5}$	45 $\frac{34}{5}$	576 816

6.13.2	(5,5,5,4,4,3)
	$\begin{array}{c c c} 7n^5 + \frac{35}{2}n^4 + 22n^3 + \frac{31}{2}n^2 + 6n + 1 & 60 & 540 \\ \hline 1\binom{n}{0} + 68\binom{n}{1} + 618\binom{n}{2} + 1812\binom{n}{3} + 2100\binom{n}{4} + 840\binom{n}{5} & 7 & 840 \end{array}$

6.14.1	(5,5,5,5,4,4)
	$\begin{array}{c c c} \frac{32}{5}n^5 + 16n^4 + \frac{62}{3}n^3 + 15n^2 + \frac{89}{15}n + 1 & 15 & 864 \\ \hline 1\binom{n}{0} + 64\binom{n}{1} + 570\binom{n}{2} + 1660\binom{n}{3} + 1920\binom{n}{4} + 768\binom{n}{5} & \frac{32}{5} & 768 \end{array}$

6.15.1	(5,5,5,5,5,5)
	$\begin{array}{c c c} 6n^5 + 15n^4 + 20n^3 + 15n^2 + 6n + 1 & 1 & 1296 \\ \hline 1\binom{n}{0} + 62\binom{n}{1} + 540\binom{n}{2} + 1560\binom{n}{3} + 1800\binom{n}{4} + 720\binom{n}{5} & 6 & 720 \end{array}$

Avec 7 sommets:

7.7.1	(2,2,2,2,2,2,2)
	$\begin{array}{c c c} \frac{5887}{180}n^6 + \frac{5887}{60}n^5 + \frac{2275}{18}n^4 + \frac{357}{4}n^3 + \frac{6643}{180}n^2 + \frac{259}{30}n + 1 & 360 & 7 \\ \hline 1\binom{n}{0} + 392\binom{n}{1} + 7350\binom{n}{2} + 37464\binom{n}{3} + 77602\binom{n}{4} + 70644\binom{n}{5} + 23548\binom{n}{6} & \frac{5887}{180} & 23548 \end{array}$

7.8.1	(3,3,2,2,2,2,2)
	$\begin{array}{c c c} \frac{4649}{180}n^6 + \frac{4649}{60}n^5 + \frac{1847}{18}n^4 + \frac{913}{12}n^3 + \frac{6041}{180}n^2 + \frac{253}{30}n + 1 & 2520 & 19 \\ \hline 1\binom{n}{0} + 324\binom{n}{1} + 5886\binom{n}{2} + 29720\binom{n}{3} + 61350\binom{n}{4} + 55788\binom{n}{5} + 18596\binom{n}{6} & \frac{4649}{180} & 18596 \end{array}$

7.8.2	(3,3,2,2,2,2,2)
	$\begin{array}{c c c} \frac{1607}{60}n^6 + \frac{1607}{20}n^5 + \frac{1267}{12}n^4 + \frac{309}{4}n^3 + \frac{1009}{30}n^2 + \frac{42}{5}n + 1 & 2520 & 17 \\ \hline 1\binom{n}{0} + 332\binom{n}{1} + 6080\binom{n}{2} + 30780\binom{n}{3} + 63600\binom{n}{4} + 57852\binom{n}{5} + 19284\binom{n}{6} & \frac{1607}{60} & 19284 \end{array}$

7.8.3	(3,3,2,2,2,2,2)
	$\begin{array}{c c c} \frac{1477}{60}n^6 + \frac{1477}{20}n^5 + \frac{195}{2}n^4 + \frac{863}{12}n^3 + \frac{1913}{60}n^2 + \frac{247}{30}n + 1 & 1260 & 21 \\ \hline 1\binom{n}{0} + 308\binom{n}{1} + 5602\binom{n}{2} + 28312\binom{n}{3} + 58466\binom{n}{4} + 53172\binom{n}{5} + 17724\binom{n}{6} & \frac{1477}{60} & 17724 \end{array}$

7.8.4	(3,3,2,2,2,2,2)
	$\begin{array}{c c c} \frac{1136}{45}n^6 + \frac{1136}{15}n^5 + \frac{904}{9}n^4 + \frac{224}{3}n^3 + \frac{1499}{45}n^2 + \frac{43}{5}n + 1 & 1260 & 20 \\ \hline 1\binom{n}{0} + 318\binom{n}{1} + 5758\binom{n}{2} + 29056\binom{n}{3} + 59968\binom{n}{4} + 54528\binom{n}{5} + 18176\binom{n}{6} & \frac{1136}{45} & 18176 \end{array}$

7.9.1	(3,3,3,3,2,2,2)
	$\begin{array}{c c c} \frac{7463}{360}n^6 + \frac{7463}{120}n^5 + \frac{6031}{72}n^4 + \frac{511}{8}n^3 + \frac{5311}{180}n^2 + \frac{119}{15}n + 1 & 5040 & 46 \\ \hline 1\binom{n}{0} + 268\binom{n}{1} + 4766\binom{n}{2} + 23922\binom{n}{3} + 49276\binom{n}{4} + 44778\binom{n}{5} + 14926\binom{n}{6} & \frac{7463}{360} & 14926 \end{array}$

7.9.2	(3,3,3,3,2,2,2)
	$\begin{array}{c c c} \frac{785}{36}n^6 + \frac{785}{12}n^5 + \frac{3161}{36}n^4 + \frac{799}{12}n^3 + \frac{547}{18}n^2 + 8n + 1 & 1260 & 40 \\ \hline 1\binom{n}{0} + 280\binom{n}{1} + 5004\binom{n}{2} + 25148\binom{n}{3} + 51824\binom{n}{4} + 47100\binom{n}{5} + 15700\binom{n}{6} & \frac{785}{36} & 15700 \end{array}$

7.9.3	(3,3,3,3,2,2,2)		
	$\frac{304}{15} n^6 + \frac{304}{5} n^5 + \frac{248}{3} n^4 + 64 n^3 + \frac{451}{15} n^2 + \frac{41}{5} n + 1$ $1 \binom{n}{0} + 266 \binom{n}{1} + 4682 \binom{n}{2} + 23424 \binom{n}{3} + 48192 \binom{n}{4} + 43776 \binom{n}{5} + 14592 \binom{n}{6}$	840	50
7.9.4	(3,3,3,3,2,2,2)		
	$\frac{2683}{120} n^6 + \frac{2683}{40} n^5 + \frac{2155}{24} n^4 + \frac{1627}{24} n^3 + \frac{617}{20} n^2 + \frac{122}{15} n + 1$ $1 \binom{n}{0} + 286 \binom{n}{1} + 5124 \binom{n}{2} + 25774 \binom{n}{3} + 53132 \binom{n}{4} + 48294 \binom{n}{5} + 16098 \binom{n}{6}$	2520	39
7.9.5	(3,3,3,3,2,2,2)		
	$\frac{1987}{90} n^6 + \frac{1987}{30} n^5 + \frac{805}{9} n^4 + \frac{137}{2} n^3 + \frac{2833}{90} n^2 + \frac{124}{15} n + 1$ $1 \binom{n}{0} + 286 \binom{n}{1} + 5082 \binom{n}{2} + 25488 \binom{n}{3} + 52484 \binom{n}{4} + 47688 \binom{n}{5} + 15896 \binom{n}{6}$	2520	41
7.9.6	(3,3,3,3,2,2,2)		
	$\frac{3857}{180} n^6 + \frac{3857}{60} n^5 + \frac{781}{9} n^4 + \frac{797}{12} n^3 + \frac{5543}{180} n^2 + \frac{83}{10} n + 1$ $1 \binom{n}{0} + 278 \binom{n}{1} + 4932 \binom{n}{2} + 24736 \binom{n}{3} + 50938 \binom{n}{4} + 46284 \binom{n}{5} + 15428 \binom{n}{6}$	1260	44
7.9.7	(3,3,3,3,2,2,2)		
	$\frac{3713}{180} n^6 + \frac{3713}{60} n^5 + \frac{757}{9} n^4 + \frac{781}{12} n^3 + \frac{5447}{180} n^2 + \frac{241}{30} n + 1$ $1 \binom{n}{0} + 270 \binom{n}{1} + 4764 \binom{n}{2} + 23840 \binom{n}{3} + 49050 \binom{n}{4} + 44556 \binom{n}{5} + 14852 \binom{n}{6}$	1260	48
7.9.8	(3,3,3,3,2,2,2)		
	$\frac{403}{20} n^6 + \frac{1209}{20} n^5 + \frac{325}{4} n^4 + \frac{247}{4} n^3 + \frac{143}{5} n^2 + \frac{39}{5} n + 1$ $1 \binom{n}{0} + 260 \binom{n}{1} + 4628 \binom{n}{2} + 23244 \binom{n}{3} + 47892 \binom{n}{4} + 43524 \binom{n}{5} + 14508 \binom{n}{6}$	840	49
7.9.9	(3,3,3,3,2,2,2)		
	$\frac{7223}{360} n^6 + \frac{7223}{120} n^5 + \frac{5875}{72} n^4 + \frac{503}{8} n^3 + \frac{5281}{180} n^2 + \frac{119}{15} n + 1$ $1 \binom{n}{0} + 262 \binom{n}{1} + 4628 \binom{n}{2} + 23178 \binom{n}{3} + 47704 \binom{n}{4} + 43338 \binom{n}{5} + 14446 \binom{n}{6}$	2520	51
7.9.10	(4,3,3,2,2,2,2)		
	$\frac{2683}{120} n^6 + \frac{2683}{40} n^5 + \frac{2155}{24} n^4 + \frac{1627}{24} n^3 + \frac{617}{20} n^2 + \frac{122}{15} n + 1$ $1 \binom{n}{0} + 286 \binom{n}{1} + 5124 \binom{n}{2} + 25774 \binom{n}{3} + 53132 \binom{n}{4} + 48294 \binom{n}{5} + 16098 \binom{n}{6}$	2520	39
7.9.11	(4,3,3,2,2,2,2)		
	$\frac{667}{30} n^6 + \frac{667}{10} n^5 + \frac{1081}{12} n^4 + 69 n^3 + \frac{1901}{60} n^2 + \frac{83}{10} n + 1$ $1 \binom{n}{0} + 288 \binom{n}{1} + 5118 \binom{n}{2} + 25668 \binom{n}{3} + 52854 \binom{n}{4} + 48024 \binom{n}{5} + 16008 \binom{n}{6}$	2520	40
7.9.12	(4,3,3,2,2,2,2)		
	$\frac{1024}{45} n^6 + \frac{1024}{15} n^5 + \frac{3299}{36} n^4 + \frac{139}{2} n^3 + \frac{5689}{180} n^2 + \frac{247}{30} n + 1$ $1 \binom{n}{0} + 292 \binom{n}{1} + 5222 \binom{n}{2} + 26244 \binom{n}{3} + 54082 \binom{n}{4} + 49152 \binom{n}{5} + 16384 \binom{n}{6}$	5040	37
7.9.13	(4,3,3,2,2,2,2)		
	$\frac{1987}{90} n^6 + \frac{1987}{30} n^5 + \frac{805}{9} n^4 + \frac{137}{2} n^3 + \frac{2833}{90} n^2 + \frac{124}{15} n + 1$ $1 \binom{n}{0} + 286 \binom{n}{1} + 5082 \binom{n}{2} + 25488 \binom{n}{3} + 52484 \binom{n}{4} + 47688 \binom{n}{5} + 15896 \binom{n}{6}$	5040	41

7.9.14	(4,4,2,2,2,2,2)	
	$\frac{337}{15} n^6 + \frac{337}{5} n^5 + \frac{545}{6} n^4 + \frac{208}{3} n^3 + \frac{317}{10} n^2 + \frac{124}{15} n + 1$ $1 \binom{n}{0} + 290 \binom{n}{1} + 5166 \binom{n}{2} + 25928 \binom{n}{3} + 53404 \binom{n}{4} + 48528 \binom{n}{5} + 16176 \binom{n}{6}$	$1260$   $\frac{337}{15}$   $16176$
7.9.15	(4,3,3,2,2,2,2)	
	$\frac{861}{40} n^6 + \frac{2583}{40} n^5 + \frac{2087}{24} n^4 + \frac{1591}{24} n^3 + \frac{1831}{60} n^2 + \frac{122}{15} n + 1$ $1 \binom{n}{0} + 278 \binom{n}{1} + 4948 \binom{n}{2} + 24838 \binom{n}{3} + 51164 \binom{n}{4} + 46494 \binom{n}{5} + 15498 \binom{n}{6}$	$5040$   $\frac{861}{40}$   $15498$
7.9.16	(4,3,3,2,2,2,2)	
	$\frac{1879}{90} n^6 + \frac{1879}{30} n^5 + \frac{3067}{36} n^4 + 66 n^3 + \frac{5567}{180} n^2 + \frac{251}{30} n + 1$ $1 \binom{n}{0} + 274 \binom{n}{1} + 4824 \binom{n}{2} + 24132 \binom{n}{3} + 49646 \binom{n}{4} + 45096 \binom{n}{5} + 15032 \binom{n}{6}$	$630$   $\frac{1879}{90}$   $15032$
7.9.17	(4,4,2,2,2,2,2)	
	$\frac{2081}{90} n^6 + \frac{2081}{30} n^5 + \frac{3359}{36} n^4 + 71 n^3 + \frac{5863}{180} n^2 + \frac{259}{30} n + 1$ $1 \binom{n}{0} + 298 \binom{n}{1} + 5312 \binom{n}{2} + 26676 \binom{n}{3} + 54958 \binom{n}{4} + 49944 \binom{n}{5} + 16648 \binom{n}{6}$	$1260$   $\frac{2081}{90}$   $16648$
7.9.18	(4,3,3,2,2,2,2)	
	$\frac{3857}{180} n^6 + \frac{3857}{60} n^5 + \frac{781}{9} n^4 + \frac{797}{12} n^3 + \frac{5543}{180} n^2 + \frac{83}{10} n + 1$ $1 \binom{n}{0} + 278 \binom{n}{1} + 4932 \binom{n}{2} + 24736 \binom{n}{3} + 50938 \binom{n}{4} + 46284 \binom{n}{5} + 15428 \binom{n}{6}$	$2520$   $\frac{3857}{180}$   $15428$
7.9.19	(4,3,3,2,2,2,2)	
	$\frac{976}{45} n^6 + \frac{976}{15} n^5 + \frac{800}{9} n^4 + \frac{208}{3} n^3 + \frac{1459}{45} n^2 + \frac{43}{5} n + 1$ $1 \binom{n}{0} + 286 \binom{n}{1} + 5022 \binom{n}{2} + 25088 \binom{n}{3} + 51584 \binom{n}{4} + 46848 \binom{n}{5} + 15616 \binom{n}{6}$	$2520$   $\frac{976}{45}$   $15616$
7.9.20	(4,4,2,2,2,2,2)	
	$\frac{263}{12} n^6 + \frac{263}{4} n^5 + 90 n^4 + \frac{845}{12} n^3 + \frac{397}{12} n^2 + \frac{53}{6} n + 1$ $1 \binom{n}{0} + 290 \binom{n}{1} + 5080 \binom{n}{2} + 25360 \binom{n}{3} + 52130 \binom{n}{4} + 47340 \binom{n}{5} + 15780 \binom{n}{6}$	$420$   $\frac{263}{12}$   $15780$
7.10.1	(3,3,3,3,3,3,2)	
	$\frac{3319}{180} n^6 + \frac{3319}{60} n^5 + \frac{680}{9} n^4 + \frac{707}{12} n^3 + \frac{5041}{180} n^2 + \frac{233}{30} n + 1$ $1 \binom{n}{0} + 244 \binom{n}{1} + 4270 \binom{n}{2} + 21328 \binom{n}{3} + 43854 \binom{n}{4} + 39828 \binom{n}{5} + 13276 \binom{n}{6}$	$1260$   $\frac{3319}{180}$   $13276$
7.10.2	(3,3,3,3,3,3,2)	
	$\frac{3059}{180} n^6 + \frac{3059}{60} n^5 + \frac{628}{9} n^4 + \frac{655}{12} n^3 + \frac{4721}{180} n^2 + \frac{223}{30} n + 1$ $1 \binom{n}{0} + 226 \binom{n}{1} + 3940 \binom{n}{2} + 19664 \binom{n}{3} + 40422 \binom{n}{4} + 36708 \binom{n}{5} + 12236 \binom{n}{6}$	$1260$   $\frac{3059}{180}$   $12236$
7.10.3	(3,3,3,3,3,3,2)	
	$\frac{1513}{90} n^6 + \frac{1513}{30} n^5 + \frac{2503}{36} n^4 + 55 n^3 + \frac{4799}{180} n^2 + \frac{227}{30} n + 1$ $1 \binom{n}{0} + 226 \binom{n}{1} + 3912 \binom{n}{2} + 19476 \binom{n}{3} + 39998 \binom{n}{4} + 36312 \binom{n}{5} + 12104 \binom{n}{6}$	$2520$   $\frac{1513}{90}$   $12104$
7.10.4	(4,3,3,3,3,2,2)	
	$\frac{319}{18} n^6 + \frac{319}{6} n^5 + \frac{656}{9} n^4 + \frac{343}{6} n^3 + \frac{493}{18} n^2 + \frac{23}{3} n + 1$ $1 \binom{n}{0} + 236 \binom{n}{1} + 4112 \binom{n}{2} + 20512 \binom{n}{3} + 42156 \binom{n}{4} + 38280 \binom{n}{5} + 12760 \binom{n}{6}$	$1260$   $\frac{319}{18}$   $12760$

7.10.5	(4,3,3,3,3,2,2)	
	$\frac{823}{45} n^6 + \frac{823}{15} n^5 + \frac{2699}{36} n^4 + \frac{117}{2} n^3 + \frac{4993}{180} n^2 + \frac{229}{30} n + 1$ $1\binom{n}{0} + 242\binom{n}{1} + 4236\binom{n}{2} + 21156\binom{n}{3} + 43498\binom{n}{4} + 39504\binom{n}{5} + 13168\binom{n}{6}$	2520   87 $\frac{823}{45}$   13168
7.10.6	(4,3,3,3,3,2,2)	
	$\frac{1603}{90} n^6 + \frac{1603}{30} n^5 + \frac{661}{9} n^4 + \frac{347}{6} n^3 + \frac{2497}{90} n^2 + \frac{116}{15} n + 1$ $1\binom{n}{0} + 238\binom{n}{1} + 4138\binom{n}{2} + 20624\binom{n}{3} + 42372\binom{n}{4} + 38472\binom{n}{5} + 12824\binom{n}{6}$	2520   95 $\frac{1603}{90}$   12824
7.10.7	(3,3,3,3,3,3,2)	
	$\frac{1477}{90} n^6 + \frac{1477}{30} n^5 + \frac{2455}{36} n^4 + \frac{163}{3} n^3 + \frac{4751}{180} n^2 + \frac{223}{30} n + 1$ $1\binom{n}{0} + 222\binom{n}{1} + 3828\binom{n}{2} + 19028\binom{n}{3} + 39054\binom{n}{4} + 35448\binom{n}{5} + 11816\binom{n}{6}$	630   117 $\frac{1477}{90}$   11816
7.10.8	(4,4,3,3,2,2,2)	
	$\frac{863}{45} n^6 + \frac{863}{15} n^5 + \frac{2863}{36} n^4 + \frac{379}{6} n^3 + \frac{5453}{180} n^2 + \frac{83}{10} n + 1$ $1\binom{n}{0} + 258\binom{n}{1} + 4468\binom{n}{2} + 22228\binom{n}{3} + 45634\binom{n}{4} + 41424\binom{n}{5} + 13808\binom{n}{6}$	2520   84 $\frac{863}{45}$   13808
7.10.9	(4,4,3,3,2,2,2)	
	$\frac{179}{9} n^6 + \frac{179}{3} n^5 + \frac{1471}{18} n^4 + 64 n^3 + \frac{547}{18} n^2 + \frac{25}{3} n + 1$ $1\binom{n}{0} + 264\binom{n}{1} + 4612\binom{n}{2} + 23016\binom{n}{3} + 47308\binom{n}{4} + 42960\binom{n}{5} + 14320\binom{n}{6}$	1260   76 $\frac{179}{9}$   14320
7.10.10	(4,3,3,3,3,2,2)	
	$\frac{179}{10} n^6 + \frac{537}{10} n^5 + \frac{887}{12} n^4 + \frac{175}{3} n^3 + \frac{1691}{60} n^2 + \frac{239}{30} n + 1$ $1\binom{n}{0} + 240\binom{n}{1} + 4162\binom{n}{2} + 20732\binom{n}{3} + 42586\binom{n}{4} + 38664\binom{n}{5} + 12888\binom{n}{6}$	1260   96 $\frac{179}{10}$   12888
7.10.11	(4,4,4,2,2,2,2)	
	$\frac{3559}{180} n^6 + \frac{3559}{60} n^5 + \frac{731}{9} n^4 + \frac{763}{12} n^3 + \frac{5401}{180} n^2 + \frac{81}{10} n + 1$ $1\binom{n}{0} + 262\binom{n}{1} + 4584\binom{n}{2} + 22880\binom{n}{3} + 47030\binom{n}{4} + 42708\binom{n}{5} + 14236\binom{n}{6}$	2520   75 $\frac{3559}{180}$   14236
7.10.12	(4,4,3,3,2,2,2)	
	$\frac{1123}{60} n^6 + \frac{1123}{20} n^5 + \frac{309}{4} n^4 + \frac{731}{12} n^3 + \frac{871}{30} n^2 + \frac{119}{15} n + 1$ $1\binom{n}{0} + 250\binom{n}{1} + 4350\binom{n}{2} + 21676\binom{n}{3} + 44528\binom{n}{4} + 40428\binom{n}{5} + 13476\binom{n}{6}$	5040   85 $\frac{1123}{60}$   13476
7.10.13	(4,4,3,3,2,2,2)	
	$\frac{877}{45} n^6 + \frac{877}{15} n^5 + \frac{2879}{36} n^4 + \frac{125}{2} n^3 + \frac{5317}{180} n^2 + \frac{241}{30} n + 1$ $1\binom{n}{0} + 258\binom{n}{1} + 4516\binom{n}{2} + 22548\binom{n}{3} + 46354\binom{n}{4} + 42096\binom{n}{5} + 14032\binom{n}{6}$	5040   79 $\frac{877}{45}$   14032
7.10.14	(4,4,3,3,2,2,2)	
	$\frac{6793}{360} n^6 + \frac{6793}{120} n^5 + \frac{5573}{72} n^4 + \frac{1451}{24} n^3 + \frac{5171}{180} n^2 + \frac{119}{15} n + 1$ $1\binom{n}{0} + 250\binom{n}{1} + 4372\binom{n}{2} + 21830\binom{n}{3} + 44880\binom{n}{4} + 40758\binom{n}{5} + 13586\binom{n}{6}$	5040   82 $\frac{6793}{360}$   13586
7.10.15	(4,4,3,3,2,2,2)	
	$\frac{3469}{180} n^6 + \frac{3469}{60} n^5 + \frac{2837}{36} n^4 + \frac{245}{4} n^3 + \frac{2603}{90} n^2 + \frac{119}{15} n + 1$ $1\binom{n}{0} + 254\binom{n}{1} + 4458\binom{n}{2} + 22284\binom{n}{3} + 45832\binom{n}{4} + 41628\binom{n}{5} + 13876\binom{n}{6}$	2520   81 $\frac{3469}{180}$   13876

7.10.16	(4,3,3,3,3,2,2)		
	$\frac{811}{45} n^6 + \frac{811}{15} n^5 + \frac{2669}{36} n^4 + \frac{349}{6} n^3 + \frac{5011}{180} n^2 + \frac{233}{30} n + 1$ $1 \binom{n}{0} + 240 \binom{n}{1} + 4182 \binom{n}{2} + 20860 \binom{n}{3} + 42870 \binom{n}{4} + 38928 \binom{n}{5} + 12976 \binom{n}{6}$	5040	94 $\frac{811}{45}$ 12976
7.10.17	(4,4,3,3,2,2,2)		
	$\frac{1181}{60} n^6 + \frac{1181}{20} n^5 + \frac{242}{3} n^4 + \frac{755}{12} n^3 + \frac{593}{20} n^2 + \frac{241}{30} n + 1$ $1 \binom{n}{0} + 260 \binom{n}{1} + 4558 \binom{n}{2} + 22768 \binom{n}{3} + 46814 \binom{n}{4} + 42516 \binom{n}{5} + 14172 \binom{n}{6}$	1260	72 $\frac{1181}{60}$ 14172
7.10.18	(4,3,3,3,3,2,2)		
	$\frac{3319}{180} n^6 + \frac{3319}{60} n^5 + \frac{680}{9} n^4 + \frac{707}{12} n^3 + \frac{5041}{180} n^2 + \frac{233}{30} n + 1$ $1 \binom{n}{0} + 244 \binom{n}{1} + 4270 \binom{n}{2} + 21328 \binom{n}{3} + 43854 \binom{n}{4} + 39828 \binom{n}{5} + 13276 \binom{n}{6}$	2520	88 $\frac{3319}{180}$ 13276
7.10.19	(4,3,3,3,3,2,2)		
	$\frac{877}{45} n^6 + \frac{877}{15} n^5 + \frac{2879}{36} n^4 + \frac{125}{2} n^3 + \frac{5317}{180} n^2 + \frac{241}{30} n + 1$ $1 \binom{n}{0} + 258 \binom{n}{1} + 4516 \binom{n}{2} + 22548 \binom{n}{3} + 46354 \binom{n}{4} + 42096 \binom{n}{5} + 14032 \binom{n}{6}$	5040	79 $\frac{877}{45}$ 14032
7.10.20	(4,3,3,3,3,2,2)		
	$\frac{1667}{90} n^6 + \frac{1667}{30} n^5 + \frac{689}{9} n^4 + \frac{121}{2} n^3 + \frac{2603}{90} n^2 + \frac{119}{15} n + 1$ $1 \binom{n}{0} + 248 \binom{n}{1} + 4308 \binom{n}{2} + 21456 \binom{n}{3} + 44068 \binom{n}{4} + 40008 \binom{n}{5} + 13336 \binom{n}{6}$	2520	88 $\frac{1667}{90}$ 13336
7.10.21	(4,4,3,3,2,2,2)		
	$\frac{113}{6} n^6 + \frac{113}{2} n^5 + \frac{467}{6} n^4 + \frac{123}{2} n^3 + \frac{88}{3} n^2 + 8 n + 1$ $1 \binom{n}{0} + 252 \binom{n}{1} + 4380 \binom{n}{2} + 21816 \binom{n}{3} + 44808 \binom{n}{4} + 40680 \binom{n}{5} + 13560 \binom{n}{6}$	1260	84 $\frac{113}{6}$ 13560
7.10.22	(4,4,3,3,2,2,2)		
	$\frac{296}{15} n^6 + \frac{296}{5} n^5 + \frac{487}{6} n^4 + \frac{191}{3} n^3 + \frac{301}{10} n^2 + \frac{122}{15} n + 1$ $1 \binom{n}{0} + 262 \binom{n}{1} + 4578 \binom{n}{2} + 22840 \binom{n}{3} + 46940 \binom{n}{4} + 42624 \binom{n}{5} + 14208 \binom{n}{6}$	5040	76 $\frac{296}{15}$ 14208
7.10.23	(4,3,3,3,3,2,2)		
	$\frac{3217}{180} n^6 + \frac{3217}{60} n^5 + \frac{662}{9} n^4 + \frac{231}{4} n^3 + \frac{4963}{180} n^2 + \frac{229}{30} n + 1$ $1 \binom{n}{0} + 238 \binom{n}{1} + 4148 \binom{n}{2} + 20688 \binom{n}{3} + 42514 \binom{n}{4} + 38604 \binom{n}{5} + 12868 \binom{n}{6}$	2520	93 $\frac{3217}{180}$ 12868
7.10.24	(4,3,3,3,3,2,2)		
	$\frac{811}{45} n^6 + \frac{811}{15} n^5 + \frac{2669}{36} n^4 + \frac{349}{6} n^3 + \frac{5011}{180} n^2 + \frac{233}{30} n + 1$ $1 \binom{n}{0} + 240 \binom{n}{1} + 4182 \binom{n}{2} + 20860 \binom{n}{3} + 42870 \binom{n}{4} + 38928 \binom{n}{5} + 12976 \binom{n}{6}$	5040	94 $\frac{811}{45}$ 12976
7.10.25	(4,3,3,3,3,2,2)		
	$\frac{1627}{90} n^6 + \frac{1627}{30} n^5 + \frac{676}{9} n^4 + \frac{359}{6} n^3 + \frac{2593}{90} n^2 + \frac{119}{15} n + 1$ $1 \binom{n}{0} + 244 \binom{n}{1} + 4216 \binom{n}{2} + 20960 \binom{n}{3} + 43020 \binom{n}{4} + 39048 \binom{n}{5} + 13016 \binom{n}{6}$	2520	96 $\frac{1627}{90}$ 13016
7.10.26	(4,4,3,3,2,2,2)		
	$\frac{1093}{60} n^6 + \frac{1093}{20} n^5 + \frac{449}{6} n^4 + \frac{703}{12} n^3 + \frac{559}{20} n^2 + \frac{233}{30} n + 1$ $1 \binom{n}{0} + 242 \binom{n}{1} + 4224 \binom{n}{2} + 21080 \binom{n}{3} + 43330 \binom{n}{4} + 39348 \binom{n}{5} + 13116 \binom{n}{6}$	2520	91 $\frac{1093}{60}$ 13116

7.10.27	(4,4,3,3,2,2,2)		
	$\frac{1151}{60} n^6 + \frac{1151}{20} n^5 + \frac{475}{6} n^4 + \frac{749}{12} n^3 + \frac{593}{20} n^2 + \frac{241}{30} n + 1$ $1 \binom{n}{0} + 256 \binom{n}{1} + 4458 \binom{n}{2} + 22216 \binom{n}{3} + 45638 \binom{n}{4} + 41436 \binom{n}{5} + 13812 \binom{n}{6}$	1260 $\frac{1151}{60}$	80 13812
7.10.28	(4,3,3,3,3,2,2)		
	$\frac{421}{24} n^6 + \frac{421}{8} n^5 + \frac{1733}{24} n^4 + \frac{1361}{24} n^3 + \frac{109}{4} n^2 + \frac{23}{3} n + 1$ $1 \binom{n}{0} + 234 \binom{n}{1} + 4072 \binom{n}{2} + 20306 \binom{n}{3} + 41728 \binom{n}{4} + 37890 \binom{n}{5} + 12630 \binom{n}{6}$	5040 $\frac{421}{24}$	98 12630
7.10.29	(4,3,3,3,3,2,2)		
	$\frac{1577}{90} n^6 + \frac{1577}{30} n^5 + \frac{2615}{36} n^4 + \frac{173}{3} n^3 + \frac{5011}{180} n^2 + \frac{233}{30} n + 1$ $1 \binom{n}{0} + 236 \binom{n}{1} + 4082 \binom{n}{2} + 20308 \binom{n}{3} + 41694 \binom{n}{4} + 37848 \binom{n}{5} + 12616 \binom{n}{6}$	5040 $\frac{1577}{90}$	101 12616
7.10.30	(4,3,3,3,3,2,2)		
	$\frac{259}{15} n^6 + \frac{259}{5} n^5 + \frac{857}{12} n^4 + \frac{113}{2} n^3 + \frac{1639}{60} n^2 + \frac{77}{10} n + 1$ $1 \binom{n}{0} + 232 \binom{n}{1} + 4018 \binom{n}{2} + 20004 \binom{n}{3} + 41082 \binom{n}{4} + 37296 \binom{n}{5} + 12432 \binom{n}{6}$	2520 $\frac{259}{15}$	104 12432
7.10.31	(4,4,3,3,2,2,2)		
	$\frac{829}{45} n^6 + \frac{829}{15} n^5 + \frac{2735}{36} n^4 + \frac{359}{6} n^3 + \frac{5149}{180} n^2 + \frac{79}{10} n + 1$ $1 \binom{n}{0} + 246 \binom{n}{1} + 4280 \binom{n}{2} + 21332 \binom{n}{3} + 43826 \binom{n}{4} + 39792 \binom{n}{5} + 13264 \binom{n}{6}$	5040 $\frac{829}{45}$	89 13264
7.10.32	(4,4,3,3,2,2,2)		
	$\frac{3289}{180} n^6 + \frac{3289}{60} n^5 + \frac{2729}{36} n^4 + \frac{241}{4} n^3 + \frac{2603}{90} n^2 + \frac{119}{15} n + 1$ $1 \binom{n}{0} + 246 \binom{n}{1} + 4258 \binom{n}{2} + 21180 \binom{n}{3} + 43480 \binom{n}{4} + 39468 \binom{n}{5} + 13156 \binom{n}{6}$	2520 $\frac{3289}{180}$	93 13156
7.10.33	(5,3,3,3,2,2,2)		
	$\frac{877}{45} n^6 + \frac{877}{15} n^5 + \frac{2879}{36} n^4 + \frac{125}{2} n^3 + \frac{5317}{180} n^2 + \frac{241}{30} n + 1$ $1 \binom{n}{0} + 258 \binom{n}{1} + 4516 \binom{n}{2} + 22548 \binom{n}{3} + 46354 \binom{n}{4} + 42096 \binom{n}{5} + 14032 \binom{n}{6}$	5040 $\frac{877}{45}$	79 14032
7.10.34	(5,3,3,3,2,2,2)		
	$\frac{296}{15} n^6 + \frac{296}{5} n^5 + \frac{487}{6} n^4 + \frac{191}{3} n^3 + \frac{301}{10} n^2 + \frac{122}{15} n + 1$ $1 \binom{n}{0} + 262 \binom{n}{1} + 4578 \binom{n}{2} + 22840 \binom{n}{3} + 46940 \binom{n}{4} + 42624 \binom{n}{5} + 14208 \binom{n}{6}$	5040 $\frac{296}{15}$	76 14208
7.10.35	(4,4,3,3,2,2,2)		
	$\frac{1111}{60} n^6 + \frac{1111}{20} n^5 + \frac{153}{2} n^4 + \frac{725}{12} n^3 + \frac{1739}{60} n^2 + \frac{241}{30} n + 1$ $1 \binom{n}{0} + 248 \binom{n}{1} + 4306 \binom{n}{2} + 21448 \binom{n}{3} + 44054 \binom{n}{4} + 39996 \binom{n}{5} + 13332 \binom{n}{6}$	1260 $\frac{1111}{60}$	88 13332
7.10.36	(4,4,3,3,2,2,2)		
	$\frac{571}{30} n^6 + \frac{571}{10} n^5 + \frac{157}{2} n^4 + \frac{371}{6} n^3 + \frac{442}{15} n^2 + \frac{121}{15} n + 1$ $1 \binom{n}{0} + 254 \binom{n}{1} + 4422 \binom{n}{2} + 22040 \binom{n}{3} + 45280 \binom{n}{4} + 41112 \binom{n}{5} + 13704 \binom{n}{6}$	2520 $\frac{571}{30}$	85 13704
7.10.37	(5,4,3,2,2,2,2)		
	$\frac{241}{12} n^6 + \frac{241}{4} n^5 + \frac{165}{2} n^4 + \frac{775}{12} n^3 + \frac{365}{12} n^2 + \frac{49}{6} n + 1$ $1 \binom{n}{0} + 266 \binom{n}{1} + 4656 \binom{n}{2} + 23240 \binom{n}{3} + 47770 \binom{n}{4} + 43380 \binom{n}{5} + 14460 \binom{n}{6}$	5040 $\frac{241}{12}$	73 14460

7.10.38	(5,3,3,3,2,2,2)			
	$\frac{571}{30} n^6 + \frac{571}{10} n^5 + \frac{157}{2} n^4 + \frac{371}{6} n^3 + \frac{442}{15} n^2 + \frac{121}{15} n + 1$ $1(n)_0 + 254(n)_1 + 4422(n)_2 + 22040(n)_3 + 45280(n)_4 + 41112(n)_5 + 13704(n)_6$	2520	85	$\frac{571}{30}$
7.10.39	(4,4,4,2,2,2,2)			
	$\frac{287}{15} n^6 + \frac{287}{5} n^5 + 79 n^4 + \frac{187}{3} n^3 + \frac{448}{15} n^2 + \frac{124}{15} n + 1$ $1(n)_0 + 256(n)_1 + 4448(n)_2 + 22160(n)_3 + 45520(n)_4 + 41328(n)_5 + 13776(n)_6$	1260	84	$\frac{287}{15}$
7.10.40	(4,4,3,3,2,2,2)			
	$\frac{826}{45} n^6 + \frac{826}{15} n^5 + \frac{2729}{36} n^4 + \frac{359}{6} n^3 + \frac{5191}{180} n^2 + \frac{81}{10} n + 1$ $1(n)_0 + 246(n)_1 + 4268(n)_2 + 21260(n)_3 + 43670(n)_4 + 39648(n)_5 + 13216(n)_6$	2520	90	$\frac{826}{45}$
7.10.41	(4,3,3,3,3,2,2)			
	$\frac{784}{45} n^6 + \frac{784}{15} n^5 + \frac{656}{9} n^4 + \frac{176}{3} n^3 + \frac{1291}{45} n^2 + \frac{121}{15} n + 1$ $1(n)_0 + 238(n)_1 + 4078(n)_2 + 20224(n)_3 + 41472(n)_4 + 37632(n)_5 + 12544(n)_6$	1260	105	$\frac{784}{45}$
7.10.42	(4,4,3,3,2,2,2)			
	$\frac{1633}{90} n^6 + \frac{1633}{30} n^5 + \frac{2719}{36} n^4 + \frac{181}{3} n^3 + \frac{5279}{180} n^2 + \frac{247}{30} n + 1$ $1(n)_0 + 246(n)_1 + 4236(n)_2 + 21044(n)_3 + 43182(n)_4 + 39192(n)_5 + 13064(n)_6$	2520	96	$\frac{1633}{90}$
7.10.43	(4,4,3,3,2,2,2)			
	$\frac{832}{45} n^6 + \frac{832}{15} n^5 + \frac{704}{9} n^4 + 64 n^3 + \frac{1408}{45} n^2 + \frac{128}{15} n + 1$ $1(n)_0 + 256(n)_1 + 4352(n)_2 + 21504(n)_3 + 44032(n)_4 + 39936(n)_5 + 13312(n)_6$	630	96	$\frac{832}{45}$
7.10.44	(5,4,3,2,2,2,2)			
	$\frac{884}{45} n^6 + \frac{884}{15} n^5 + \frac{733}{9} n^4 + \frac{194}{3} n^3 + \frac{1391}{45} n^2 + \frac{42}{5} n + 1$ $1(n)_0 + 264(n)_1 + 4576(n)_2 + 22768(n)_3 + 46744(n)_4 + 42432(n)_5 + 14144(n)_6$	1260	80	$\frac{884}{45}$
7.10.45	(5,4,3,2,2,2,2)			
	$\frac{179}{9} n^6 + \frac{179}{3} n^5 + \frac{1471}{18} n^4 + 64 n^3 + \frac{547}{18} n^2 + \frac{25}{3} n + 1$ $1(n)_0 + 264(n)_1 + 4612(n)_2 + 23016(n)_3 + 47308(n)_4 + 42960(n)_5 + 14320(n)_6$	2520	76	$\frac{179}{9}$
7.10.46	(5,4,3,2,2,2,2)			
	$\frac{102}{5} n^6 + \frac{306}{5} n^5 + \frac{1015}{12} n^4 + \frac{403}{6} n^3 + \frac{1921}{60} n^2 + \frac{259}{30} n + 1$ $1(n)_0 + 274(n)_1 + 4752(n)_2 + 23644(n)_3 + 48542(n)_4 + 44064(n)_5 + 14688(n)_6$	2520	72	$\frac{102}{5}$
7.10.47	(5,3,3,3,2,2,2)			
	$\frac{863}{45} n^6 + \frac{863}{15} n^5 + \frac{2863}{36} n^4 + \frac{379}{6} n^3 + \frac{5453}{180} n^2 + \frac{83}{10} n + 1$ $1(n)_0 + 258(n)_1 + 4468(n)_2 + 22228(n)_3 + 45634(n)_4 + 41424(n)_5 + 13808(n)_6$	2520	84	$\frac{863}{45}$
7.10.48	(5,5,2,2,2,2,2)			
	$\frac{211}{10} n^6 + \frac{633}{10} n^5 + \frac{263}{3} n^4 + \frac{419}{6} n^3 + \frac{997}{30} n^2 + \frac{133}{15} n + 1$ $1(n)_0 + 284(n)_1 + 4920(n)_2 + 24464(n)_3 + 50212(n)_4 + 45576(n)_5 + 15192(n)_6$	420	68	$\frac{211}{10}$

7.10.49	(5,4,3,2,2,2,2)	
	$\frac{593}{30} n^6 + \frac{593}{10} n^5 + \frac{250}{3} n^4 + \frac{407}{6} n^3 + \frac{329}{10} n^2 + \frac{133}{15} n + 1$ $1\binom{n}{0} + 272\binom{n}{1} + 4644\binom{n}{2} + 22976\binom{n}{3} + 47068\binom{n}{4} + 42696\binom{n}{5} + 14232\binom{n}{6}$	840   $\frac{593}{30}$   14232 84
7.10.50	(5,5,2,2,2,2,2)	
	$\frac{64}{3} n^6 + 64 n^5 + \frac{280}{3} n^4 + 80 n^3 + \frac{118}{3} n^2 + 10 n + 1$ $1\binom{n}{0} + 308\binom{n}{1} + 5108\binom{n}{2} + 24960\binom{n}{3} + 50880\binom{n}{4} + 46080\binom{n}{5} + 15360\binom{n}{6}$	21   $\frac{64}{3}$   15360 80
7.11.1	(4,4,4,3,3,2,2)	
	$\frac{2101}{120} n^6 + \frac{2101}{40} n^5 + \frac{1753}{24} n^4 + \frac{1405}{24} n^3 + \frac{569}{20} n^2 + \frac{119}{15} n + 1$ $1\binom{n}{0} + 238\binom{n}{1} + 4092\binom{n}{2} + 20314\binom{n}{3} + 41672\binom{n}{4} + 37818\binom{n}{5} + 12606\binom{n}{6}$	2520   $\frac{2101}{120}$   12606 144
7.11.2	(4,3,3,3,3,3,3)	
	$\frac{691}{45} n^6 + \frac{691}{15} n^5 + \frac{2309}{36} n^4 + \frac{103}{2} n^3 + \frac{4591}{180} n^2 + \frac{223}{30} n + 1$ $1\binom{n}{0} + 210\binom{n}{1} + 3592\binom{n}{2} + 17820\binom{n}{3} + 36550\binom{n}{4} + 33168\binom{n}{5} + 11056\binom{n}{6}$	630   $\frac{691}{45}$   11056 192
7.11.3	(4,4,3,3,3,3,2)	
	$\frac{169}{10} n^6 + \frac{507}{10} n^5 + \frac{141}{2} n^4 + \frac{113}{2} n^3 + \frac{138}{5} n^2 + \frac{39}{5} n + 1$ $1\binom{n}{0} + 230\binom{n}{1} + 3950\binom{n}{2} + 19608\binom{n}{3} + 40224\binom{n}{4} + 36504\binom{n}{5} + 12168\binom{n}{6}$	1260   $\frac{169}{10}$   12168 152
7.11.4	(4,4,3,3,3,3,2)	
	$\frac{737}{45} n^6 + \frac{737}{15} n^5 + \frac{2467}{36} n^4 + \frac{331}{6} n^3 + \frac{4877}{180} n^2 + \frac{77}{10} n + 1$ $1\binom{n}{0} + 224\binom{n}{1} + 3834\binom{n}{2} + 19012\binom{n}{3} + 38986\binom{n}{4} + 35376\binom{n}{5} + 11792\binom{n}{6}$	2520   $\frac{737}{45}$   11792 168
7.11.5	(4,4,4,4,2,2,2)	
	$\frac{313}{18} n^6 + \frac{313}{6} n^5 + \frac{656}{9} n^4 + \frac{353}{6} n^3 + \frac{517}{18} n^2 + 8 n + 1$ $1\binom{n}{0} + 238\binom{n}{1} + 4074\binom{n}{2} + 20192\binom{n}{3} + 41396\binom{n}{4} + 37560\binom{n}{5} + 12520\binom{n}{6}$	1260   $\frac{313}{18}$   12520 140
7.11.6	(4,4,4,3,3,2,2)	
	$\frac{2957}{180} n^6 + \frac{2957}{60} n^5 + \frac{1235}{18} n^4 + \frac{661}{12} n^3 + \frac{4853}{180} n^2 + \frac{229}{30} n + 1$ $1\binom{n}{0} + 224\binom{n}{1} + 3842\binom{n}{2} + 19064\binom{n}{3} + 39102\binom{n}{4} + 35484\binom{n}{5} + 11828\binom{n}{6}$	2520   $\frac{2957}{180}$   11828 155
7.11.7	(4,4,4,3,3,2,2)	
	$\frac{1451}{90} n^6 + \frac{1451}{30} n^5 + \frac{2423}{36} n^4 + 54 n^3 + \frac{4783}{180} n^2 + \frac{229}{30} n + 1$ $1\binom{n}{0} + 220\binom{n}{1} + 3770\binom{n}{2} + 18708\binom{n}{3} + 38374\binom{n}{4} + 34824\binom{n}{5} + 11608\binom{n}{6}$	2520   $\frac{1451}{90}$   11608 168
7.11.8	(4,4,3,3,3,3,2)	
	$\frac{1093}{72} n^6 + \frac{1093}{24} n^5 + \frac{4573}{72} n^4 + \frac{409}{8} n^3 + \frac{911}{36} n^2 + \frac{22}{3} n + 1$ $1\binom{n}{0} + 208\binom{n}{1} + 3554\binom{n}{2} + 17622\binom{n}{3} + 36136\binom{n}{4} + 32790\binom{n}{5} + 10930\binom{n}{6}$	5040   $\frac{1093}{72}$   10930 194
7.11.9	(4,4,3,3,3,3,2)	
	$\frac{1903}{120} n^6 + \frac{1903}{40} n^5 + \frac{529}{8} n^4 + \frac{1271}{24} n^3 + \frac{1561}{60} n^2 + \frac{112}{15} n + 1$ $1\binom{n}{0} + 216\binom{n}{1} + 3706\binom{n}{2} + 18398\binom{n}{3} + 37744\binom{n}{4} + 34254\binom{n}{5} + 11418\binom{n}{6}$	5040   $\frac{1903}{120}$   11418 177

7.11.10	(4,4,3,3,3,3,2)		
	$\frac{1847}{120} n^6 + \frac{1847}{40} n^5 + \frac{1541}{24} n^4 + \frac{1235}{24} n^3 + \frac{127}{5} n^2 + \frac{221}{30} n + 1$ $1\binom{n}{0} + 210\binom{n}{1} + 3598\binom{n}{2} + 17858\binom{n}{3} + 36634\binom{n}{4} + 33246\binom{n}{5} + 11082\binom{n}{6}$	2520	185
7.11.11	(4,3,3,3,3,3,3)		
	$\frac{2651}{180} n^6 + \frac{2651}{60} n^5 + \frac{1109}{18} n^4 + \frac{595}{12} n^3 + \frac{4439}{180} n^2 + \frac{217}{30} n + 1$ $1\binom{n}{0} + 202\binom{n}{1} + 3448\binom{n}{2} + 17096\binom{n}{3} + 35058\binom{n}{4} + 31812\binom{n}{5} + 10604\binom{n}{6}$	2520	209
7.11.12	(4,4,3,3,3,3,2)		
	$\frac{137}{9} n^6 + \frac{137}{3} n^5 + \frac{572}{9} n^4 + 51 n^3 + \frac{227}{9} n^2 + \frac{22}{3} n + 1$ $1\binom{n}{0} + 208\binom{n}{1} + 3560\binom{n}{2} + 17664\binom{n}{3} + 36232\binom{n}{4} + 32880\binom{n}{5} + 10960\binom{n}{6}$	1260	195
7.11.13	(4,4,4,3,3,2,2)		
	$\frac{1901}{120} n^6 + \frac{1901}{40} n^5 + \frac{1597}{24} n^4 + \frac{431}{8} n^3 + \frac{1597}{60} n^2 + \frac{38}{5} n + 1$ $1\binom{n}{0} + 218\binom{n}{1} + 3716\binom{n}{2} + 18402\binom{n}{3} + 37716\binom{n}{4} + 34218\binom{n}{5} + 11406\binom{n}{6}$	2520	176
7.11.14	(4,4,4,3,3,2,2)		
	$\frac{1477}{90} n^6 + \frac{1477}{30} n^5 + \frac{1235}{18} n^4 + \frac{331}{6} n^3 + \frac{1214}{45} n^2 + \frac{38}{5} n + 1$ $1\binom{n}{0} + 224\binom{n}{1} + 3840\binom{n}{2} + 19048\binom{n}{3} + 39064\binom{n}{4} + 35448\binom{n}{5} + 11816\binom{n}{6}$	2520	159
7.11.15	(4,4,4,3,3,2,2)		
	$\frac{191}{12} n^6 + \frac{191}{4} n^5 + \frac{805}{12} n^4 + \frac{655}{12} n^3 + 27 n^2 + \frac{23}{3} n + 1$ $1\binom{n}{0} + 220\binom{n}{1} + 3740\binom{n}{2} + 18500\binom{n}{3} + 37900\binom{n}{4} + 34380\binom{n}{5} + 11460\binom{n}{6}$	1260	175
7.11.16	(4,3,3,3,3,3,3)		
	$\frac{287}{20} n^6 + \frac{861}{20} n^5 + \frac{241}{4} n^4 + \frac{195}{4} n^3 + \frac{122}{5} n^2 + \frac{36}{5} n + 1$ $1\binom{n}{0} + 198\binom{n}{1} + 3366\binom{n}{2} + 16668\binom{n}{3} + 34164\binom{n}{4} + 30996\binom{n}{5} + 10332\binom{n}{6}$	1260	224
7.11.17	(4,4,3,3,3,3,2)		
	$\frac{917}{60} n^6 + \frac{917}{20} n^5 + \frac{769}{12} n^4 + \frac{207}{4} n^3 + \frac{769}{30} n^2 + \frac{37}{5} n + 1$ $1\binom{n}{0} + 210\binom{n}{1} + 3582\binom{n}{2} + 17748\binom{n}{3} + 36384\binom{n}{4} + 33012\binom{n}{5} + 11004\binom{n}{6}$	5040	191
7.11.18	(4,4,3,3,3,3,2)		
	$\frac{1091}{72} n^6 + \frac{1091}{24} n^5 + \frac{4601}{72} n^4 + \frac{1249}{24} n^3 + \frac{467}{18} n^2 + \frac{15}{2} n + 1$ $1\binom{n}{0} + 210\binom{n}{1} + 3562\binom{n}{2} + 17614\binom{n}{3} + 36082\binom{n}{4} + 32730\binom{n}{5} + 10910\binom{n}{6}$	5040	199
7.11.19	(5,3,3,3,3,3,2)		
	$\frac{949}{60} n^6 + \frac{949}{20} n^5 + \frac{793}{12} n^4 + \frac{637}{12} n^3 + \frac{261}{10} n^2 + \frac{112}{15} n + 1$ $1\binom{n}{0} + 216\binom{n}{1} + 3700\binom{n}{2} + 18356\binom{n}{3} + 37648\binom{n}{4} + 34164\binom{n}{5} + 11388\binom{n}{6}$	2520	176
7.11.20	(4,4,4,3,3,2,2)		
	$\frac{587}{36} n^6 + \frac{587}{12} n^5 + \frac{2447}{36} n^4 + \frac{653}{12} n^3 + \frac{481}{18} n^2 + \frac{23}{3} n + 1$ $1\binom{n}{0} + 222\binom{n}{1} + 3810\binom{n}{2} + 18916\binom{n}{3} + 38808\binom{n}{4} + 35220\binom{n}{5} + 11740\binom{n}{6}$	1260	168

7.11.21	(4,4,4,3,3,2,2)		
	$\frac{5719}{360} n^6 + \frac{5719}{120} n^5 + \frac{4793}{72} n^4 + \frac{1289}{24} n^3 + \frac{2389}{90} n^2 + \frac{229}{30} n + 1$ $1 \binom{n}{0} + 218 \binom{n}{1} + 3722 \binom{n}{2} + 18446 \binom{n}{3} + 37818 \binom{n}{4} + 34314 \binom{n}{5} + 11438 \binom{n}{6}$	5040 $\frac{5719}{360}$	178 11438
7.11.22	(4,4,4,3,3,2,2)		
	$\frac{5963}{360} n^6 + \frac{5963}{120} n^5 + \frac{4981}{72} n^4 + \frac{1333}{24} n^3 + \frac{2453}{90} n^2 + \frac{233}{30} n + 1$ $1 \binom{n}{0} + 226 \binom{n}{1} + 3874 \binom{n}{2} + 19222 \binom{n}{3} + 39426 \binom{n}{4} + 35778 \binom{n}{5} + 11926 \binom{n}{6}$	5040 $\frac{5963}{360}$	162 11926
7.11.23	(4,4,4,4,2,2,2)		
	$\frac{101}{6} n^6 + \frac{101}{2} n^5 + \frac{845}{12} n^4 + \frac{170}{3} n^3 + \frac{111}{4} n^2 + \frac{47}{6} n + 1$ $1 \binom{n}{0} + 230 \binom{n}{1} + 3940 \binom{n}{2} + 19540 \binom{n}{3} + 40070 \binom{n}{4} + 36360 \binom{n}{5} + 12120 \binom{n}{6}$	2520 $\frac{101}{6}$	155 12120
7.11.24	(4,4,3,3,3,3,2)		
	$\frac{463}{30} n^6 + \frac{463}{10} n^5 + \frac{194}{3} n^4 + \frac{313}{6} n^3 + \frac{259}{10} n^2 + \frac{113}{15} n + 1$ $1 \binom{n}{0} + 212 \binom{n}{1} + 3616 \binom{n}{2} + 17920 \binom{n}{3} + 36740 \binom{n}{4} + 33336 \binom{n}{5} + 11112 \binom{n}{6}$	2520 $\frac{463}{30}$	190 11112
7.11.25	(4,4,4,3,3,2,2)		
	$\frac{1933}{120} n^6 + \frac{1933}{40} n^5 + \frac{1615}{24} n^4 + \frac{1297}{24} n^3 + \frac{133}{5} n^2 + \frac{229}{30} n + 1$ $1 \binom{n}{0} + 220 \binom{n}{1} + 3768 \binom{n}{2} + 18694 \binom{n}{3} + 38342 \binom{n}{4} + 34794 \binom{n}{5} + 11598 \binom{n}{6}$	5040 $\frac{1933}{120}$	169 11598
7.11.26	(4,4,4,3,3,2,2)		
	$\frac{3013}{180} n^6 + \frac{3013}{60} n^5 + \frac{2531}{36} n^4 + \frac{683}{12} n^3 + \frac{1258}{45} n^2 + \frac{118}{15} n + 1$ $1 \binom{n}{0} + 230 \binom{n}{1} + 3926 \binom{n}{2} + 19444 \binom{n}{3} + 39852 \binom{n}{4} + 36156 \binom{n}{5} + 12052 \binom{n}{6}$	2520 $\frac{3013}{180}$	160 12052
7.11.27	(4,4,3,3,3,3,2)		
	$\frac{1361}{90} n^6 + \frac{1361}{30} n^5 + \frac{1141}{18} n^4 + \frac{307}{6} n^3 + \frac{1147}{45} n^2 + \frac{112}{15} n + 1$ $1 \binom{n}{0} + 208 \binom{n}{1} + 3544 \binom{n}{2} + 17560 \binom{n}{3} + 36000 \binom{n}{4} + 32664 \binom{n}{5} + 10888 \binom{n}{6}$	5040 $\frac{1361}{90}$	196 10888
7.11.28	(4,4,4,3,3,2,2)		
	$\frac{159}{10} n^6 + \frac{477}{10} n^5 + \frac{799}{12} n^4 + \frac{161}{3} n^3 + \frac{1591}{60} n^2 + \frac{229}{30} n + 1$ $1 \binom{n}{0} + 218 \binom{n}{1} + 3724 \binom{n}{2} + 18460 \binom{n}{3} + 37850 \binom{n}{4} + 34344 \binom{n}{5} + 11448 \binom{n}{6}$	2520 $\frac{159}{10}$	171 11448
7.11.29	(4,4,4,3,3,2,2)		
	$\frac{1151}{72} n^6 + \frac{1151}{24} n^5 + \frac{4835}{72} n^4 + \frac{435}{8} n^3 + \frac{967}{36} n^2 + \frac{23}{3} n + 1$ $1 \binom{n}{0} + 220 \binom{n}{1} + 3750 \binom{n}{2} + 18570 \binom{n}{3} + 38060 \binom{n}{4} + 34530 \binom{n}{5} + 11510 \binom{n}{6}$	5040 $\frac{1151}{72}$	175 11510
7.11.30	(4,4,4,3,3,2,2)		
	$\frac{2861}{180} n^6 + \frac{2861}{60} n^5 + \frac{1205}{18} n^4 + \frac{653}{12} n^3 + \frac{4889}{180} n^2 + \frac{79}{10} n + 1$ $1 \binom{n}{0} + 220 \binom{n}{1} + 3734 \binom{n}{2} + 18472 \binom{n}{3} + 37846 \binom{n}{4} + 34332 \binom{n}{5} + 11444 \binom{n}{6}$	1260 $\frac{2861}{180}$	180 11444
7.11.31	(4,4,4,3,3,2,2)		
	$\frac{2897}{180} n^6 + \frac{2897}{60} n^5 + \frac{1211}{18} n^4 + \frac{649}{12} n^3 + \frac{4793}{180} n^2 + \frac{229}{30} n + 1$ $1 \binom{n}{0} + 220 \binom{n}{1} + 3766 \binom{n}{2} + 18680 \binom{n}{3} + 38310 \binom{n}{4} + 34764 \binom{n}{5} + 11588 \binom{n}{6}$	1260 $\frac{2897}{180}$	165 11588

7.11.32	(4,4,4,3,3,2,2)	
	$\frac{1883}{120} n^6 + \frac{1883}{40} n^5 + \frac{527}{8} n^4 + \frac{1279}{24} n^3 + \frac{793}{30} n^2 + \frac{229}{30} n + 1$ $1 \binom{n}{0} + 216 \binom{n}{1} + 3680 \binom{n}{2} + 18226 \binom{n}{3} + 37358 \binom{n}{4} + 33894 \binom{n}{5} + 11298 \binom{n}{6}$	$5040 \quad 181$ $\frac{1883}{120} \quad 11298$
7.11.33	(4,4,3,3,3,3,2)	
	$\frac{151}{10} n^6 + \frac{453}{10} n^5 + \frac{761}{12} n^4 + \frac{154}{3} n^3 + \frac{1529}{60} n^2 + \frac{221}{30} n + 1$ $1 \binom{n}{0} + 208 \binom{n}{1} + 3542 \binom{n}{2} + 17540 \binom{n}{3} + 35950 \binom{n}{4} + 32616 \binom{n}{5} + 10872 \binom{n}{6}$	$1260 \quad 195$ $\frac{151}{10} \quad 10872$
7.11.34	(4,3,3,3,3,3,3)	
	$\frac{2561}{180} n^6 + \frac{2561}{60} n^5 + \frac{541}{9} n^4 + \frac{589}{12} n^3 + \frac{4439}{180} n^2 + \frac{217}{30} n + 1$ $1 \binom{n}{0} + 198 \binom{n}{1} + 3348 \binom{n}{2} + 16544 \binom{n}{3} + 33882 \binom{n}{4} + 30732 \binom{n}{5} + 10244 \binom{n}{6}$	$1260 \quad 231$ $\frac{2561}{180} \quad 10244$
7.11.35	(4,4,4,3,3,2,2)	
	$\frac{947}{60} n^6 + \frac{947}{20} n^5 + \frac{803}{12} n^4 + \frac{659}{12} n^3 + \frac{273}{10} n^2 + \frac{116}{15} n + 1$ $1 \binom{n}{0} + 220 \binom{n}{1} + 3720 \binom{n}{2} + 18364 \binom{n}{3} + 37592 \binom{n}{4} + 34092 \binom{n}{5} + 11364 \binom{n}{6}$	$2520 \quad 184$ $\frac{947}{60} \quad 11364$
7.11.36	(4,4,4,4,2,2,2)	
	$\frac{509}{30} n^6 + \frac{509}{10} n^5 + \frac{217}{3} n^4 + \frac{359}{6} n^3 + \frac{297}{10} n^2 + \frac{124}{15} n + 1$ $1 \binom{n}{0} + 238 \binom{n}{1} + 4010 \binom{n}{2} + 19760 \binom{n}{3} + 40420 \binom{n}{4} + 36648 \binom{n}{5} + 12216 \binom{n}{6}$	$630 \quad 160$ $\frac{509}{30} \quad 12216$
7.11.37	(4,4,3,3,3,3,2)	
	$\frac{2683}{180} n^6 + \frac{2683}{60} n^5 + \frac{1129}{18} n^4 + \frac{611}{12} n^3 + \frac{4567}{180} n^2 + \frac{221}{30} n + 1$ $1 \binom{n}{0} + 206 \binom{n}{1} + 3500 \binom{n}{2} + 17320 \binom{n}{3} + 35490 \binom{n}{4} + 32196 \binom{n}{5} + 10732 \binom{n}{6}$	$2520 \quad 204$ $\frac{2683}{180} \quad 10732$
7.11.38	(4,4,3,3,3,3,2)	
	$\frac{674}{45} n^6 + \frac{674}{15} n^5 + \frac{1139}{18} n^4 + \frac{155}{3} n^3 + \frac{2317}{90} n^2 + \frac{37}{5} n + 1$ $1 \binom{n}{0} + 208 \binom{n}{1} + 3524 \binom{n}{2} + 17416 \binom{n}{3} + 35668 \binom{n}{4} + 32352 \binom{n}{5} + 10784 \binom{n}{6}$	$630 \quad 207$ $\frac{674}{45} \quad 10784$
7.11.39	(4,4,3,3,3,3,2)	
	$\frac{2771}{180} n^6 + \frac{2771}{60} n^5 + \frac{1163}{18} n^4 + \frac{209}{4} n^3 + \frac{4679}{180} n^2 + \frac{227}{30} n + 1$ $1 \binom{n}{0} + 212 \binom{n}{1} + 3610 \binom{n}{2} + 17880 \binom{n}{3} + 36650 \binom{n}{4} + 33252 \binom{n}{5} + 11084 \binom{n}{6}$	$2520 \quad 192$ $\frac{2771}{180} \quad 11084$
7.11.40	(4,4,3,3,3,3,2)	
	$\frac{2833}{180} n^6 + \frac{2833}{60} n^5 + \frac{2375}{36} n^4 + \frac{213}{4} n^3 + \frac{1183}{45} n^2 + \frac{113}{15} n + 1$ $1 \binom{n}{0} + 216 \binom{n}{1} + 3688 \binom{n}{2} + 18276 \binom{n}{3} + 37468 \binom{n}{4} + 33996 \binom{n}{5} + 11332 \binom{n}{6}$	$2520 \quad 183$ $\frac{2833}{180} \quad 11332$
7.11.41	(4,4,3,3,3,3,2)	
	$\frac{1403}{90} n^6 + \frac{1403}{30} n^5 + \frac{596}{9} n^4 + \frac{109}{2} n^3 + \frac{2447}{90} n^2 + \frac{116}{15} n + 1$ $1 \binom{n}{0} + 218 \binom{n}{1} + 3678 \binom{n}{2} + 18144 \binom{n}{3} + 37132 \binom{n}{4} + 33672 \binom{n}{5} + 11224 \binom{n}{6}$	$630 \quad 192$ $\frac{1403}{90} \quad 11224$
7.11.42	(5,4,4,3,2,2,2)	
	$\frac{217}{12} n^6 + \frac{217}{4} n^5 + \frac{911}{12} n^4 + \frac{737}{12} n^3 + 30 n^2 + \frac{25}{3} n + 1$ $1 \binom{n}{0} + 248 \binom{n}{1} + 4240 \binom{n}{2} + 21004 \binom{n}{3} + 43052 \binom{n}{4} + 39060 \binom{n}{5} + 13020 \binom{n}{6}$	$2520 \quad 136$ $\frac{217}{12} \quad 13020$

7.11.43	(5,4,3,3,3,2,2)	
	$\frac{50}{3} n^6 + 50 n^5 + \frac{421}{6} n^4 + 57 n^3 + \frac{169}{6} n^2 + 8 n + 1$ $1 \binom{n}{0} + 230 \binom{n}{1} + 3914 \binom{n}{2} + 19368 \binom{n}{3} + 39684 \binom{n}{4} + 36000 \binom{n}{5} + 12000 \binom{n}{6}$	$1260$ $\frac{50}{3}$ $12000$
7.11.44	(5,4,3,3,3,2,2)	
	$\frac{151}{9} n^6 + \frac{151}{3} n^5 + \frac{1265}{18} n^4 + \frac{170}{3} n^3 + \frac{503}{18} n^2 + 8 n + 1$ $1 \binom{n}{0} + 230 \binom{n}{1} + 3930 \binom{n}{2} + 19480 \binom{n}{3} + 39940 \binom{n}{4} + 36240 \binom{n}{5} + 12080 \binom{n}{6}$	$1260$ $\frac{151}{9}$ $12080$
7.11.45	(5,4,4,3,2,2,2)	
	$\frac{3137}{180} n^6 + \frac{3137}{60} n^5 + \frac{1313}{18} n^4 + \frac{235}{4} n^3 + \frac{5153}{180} n^2 + \frac{239}{30} n + 1$ $1 \binom{n}{0} + 238 \binom{n}{1} + 4080 \binom{n}{2} + 20232 \binom{n}{3} + 41486 \binom{n}{4} + 37644 \binom{n}{5} + 12548 \binom{n}{6}$	$5040$ $\frac{3137}{180}$ $12548$
7.11.46	(5,4,4,3,2,2,2)	
	$\frac{3161}{180} n^6 + \frac{3161}{60} n^5 + \frac{658}{9} n^4 + \frac{701}{12} n^3 + \frac{5099}{180} n^2 + \frac{79}{10} n + 1$ $1 \binom{n}{0} + 238 \binom{n}{1} + 4100 \binom{n}{2} + 20368 \binom{n}{3} + 41794 \binom{n}{4} + 37932 \binom{n}{5} + 12644 \binom{n}{6}$	$5040$ $\frac{3161}{180}$ $12644$
7.11.47	(5,4,3,3,3,2,2)	
	$\frac{667}{40} n^6 + \frac{2001}{40} n^5 + \frac{1675}{24} n^4 + \frac{1349}{24} n^3 + \frac{413}{15} n^2 + \frac{233}{30} n + 1$ $1 \binom{n}{0} + 228 \binom{n}{1} + 3904 \binom{n}{2} + 19358 \binom{n}{3} + 39694 \binom{n}{4} + 36018 \binom{n}{5} + 12006 \binom{n}{6}$	$5040$ $\frac{667}{40}$ $12006$
7.11.48	(5,4,3,3,3,2,2)	
	$\frac{5963}{360} n^6 + \frac{5963}{120} n^5 + \frac{4981}{72} n^4 + \frac{1333}{24} n^3 + \frac{2453}{90} n^2 + \frac{233}{30} n + 1$ $1 \binom{n}{0} + 226 \binom{n}{1} + 3874 \binom{n}{2} + 19222 \binom{n}{3} + 39426 \binom{n}{4} + 35778 \binom{n}{5} + 11926 \binom{n}{6}$	$5040$ $\frac{5963}{360}$ $11926$
7.11.49	(5,4,3,3,3,2,2)	
	$\frac{169}{10} n^6 + \frac{507}{10} n^5 + \frac{141}{2} n^4 + \frac{113}{2} n^3 + \frac{138}{5} n^2 + \frac{39}{5} n + 1$ $1 \binom{n}{0} + 230 \binom{n}{1} + 3950 \binom{n}{2} + 19608 \binom{n}{3} + 40224 \binom{n}{4} + 36504 \binom{n}{5} + 12168 \binom{n}{6}$	$2520$ $\frac{169}{10}$ $12168$
7.11.50	(5,4,3,3,3,2,2)	
	$\frac{2101}{120} n^6 + \frac{2101}{40} n^5 + \frac{1753}{24} n^4 + \frac{1405}{24} n^3 + \frac{569}{20} n^2 + \frac{119}{15} n + 1$ $1 \binom{n}{0} + 238 \binom{n}{1} + 4092 \binom{n}{2} + 20314 \binom{n}{3} + 41672 \binom{n}{4} + 37818 \binom{n}{5} + 12606 \binom{n}{6}$	$5040$ $\frac{2101}{120}$ $12606$
7.11.51	(5,4,3,3,3,2,2)	
	$\frac{517}{30} n^6 + \frac{517}{10} n^5 + \frac{289}{4} n^4 + \frac{175}{3} n^3 + \frac{1711}{60} n^2 + \frac{239}{30} n + 1$ $1 \binom{n}{0} + 236 \binom{n}{1} + 4038 \binom{n}{2} + 20012 \binom{n}{3} + 41026 \binom{n}{4} + 37224 \binom{n}{5} + 12408 \binom{n}{6}$	$2520$ $\frac{517}{30}$ $12408$
7.11.52	(5,3,3,3,3,3,2)	
	$\frac{737}{45} n^6 + \frac{737}{15} n^5 + \frac{2467}{36} n^4 + \frac{331}{6} n^3 + \frac{4877}{180} n^2 + \frac{77}{10} n + 1$ $1 \binom{n}{0} + 224 \binom{n}{1} + 3834 \binom{n}{2} + 19012 \binom{n}{3} + 38986 \binom{n}{4} + 35376 \binom{n}{5} + 11792 \binom{n}{6}$	$2520$ $\frac{737}{45}$ $11792$
7.11.53	(5,4,3,3,3,2,2)	
	$\frac{497}{30} n^6 + \frac{497}{10} n^5 + \frac{277}{4} n^4 + \frac{167}{3} n^3 + \frac{1631}{60} n^2 + \frac{229}{30} n + 1$ $1 \binom{n}{0} + 226 \binom{n}{1} + 3876 \binom{n}{2} + 19228 \binom{n}{3} + 39434 \binom{n}{4} + 35784 \binom{n}{5} + 11928 \binom{n}{6}$	$2520$ $\frac{497}{30}$ $11928$

7.11.54	(5,4,3,3,3,2,2)			
	$\frac{667}{40} n^6 + \frac{2001}{40} n^5 + \frac{1675}{24} n^4 + \frac{1349}{24} n^3 + \frac{413}{15} n^2 + \frac{233}{30} n + 1$ $1\binom{n}{0} + 228\binom{n}{1} + 3904\binom{n}{2} + 19358\binom{n}{3} + 39694\binom{n}{4} + 36018\binom{n}{5} + 12006\binom{n}{6}$	5040	159	$\frac{667}{40}$ 12006
7.11.55	(5,4,3,3,3,2,2)			
	$\frac{253}{15} n^6 + \frac{253}{5} n^5 + \frac{851}{12} n^4 + \frac{115}{2} n^3 + \frac{1693}{60} n^2 + \frac{79}{10} n + 1$ $1\binom{n}{0} + 232\binom{n}{1} + 3958\binom{n}{2} + 19596\binom{n}{3} + 40158\binom{n}{4} + 36432\binom{n}{5} + 12144\binom{n}{6}$	2520	156	$\frac{253}{15}$ 12144
7.11.56	(5,3,3,3,3,3,2)			
	$\frac{2833}{180} n^6 + \frac{2833}{60} n^5 + \frac{2375}{36} n^4 + \frac{213}{4} n^3 + \frac{1183}{45} n^2 + \frac{113}{15} n + 1$ $1\binom{n}{0} + 216\binom{n}{1} + 3688\binom{n}{2} + 18276\binom{n}{3} + 37468\binom{n}{4} + 33996\binom{n}{5} + 11332\binom{n}{6}$	2520	183	$\frac{2833}{180}$ 11332
7.11.57	(4,4,3,3,3,3,2)			
	$\frac{901}{60} n^6 + \frac{901}{20} n^5 + \frac{253}{4} n^4 + \frac{617}{12} n^3 + \frac{386}{15} n^2 + \frac{113}{15} n + 1$ $1\binom{n}{0} + 208\binom{n}{1} + 3528\binom{n}{2} + 17452\binom{n}{3} + 35756\binom{n}{4} + 32436\binom{n}{5} + 10812\binom{n}{6}$	2520	205	$\frac{901}{60}$ 10812
7.11.58	(5,4,4,3,2,2,2)			
	$\frac{1013}{60} n^6 + \frac{1013}{20} n^5 + \frac{141}{2} n^4 + \frac{679}{12} n^3 + \frac{1657}{60} n^2 + \frac{233}{30} n + 1$ $1\binom{n}{0} + 230\binom{n}{1} + 3948\binom{n}{2} + 19592\binom{n}{3} + 40186\binom{n}{4} + 36468\binom{n}{5} + 12156\binom{n}{6}$	2520	153	$\frac{1013}{60}$ 12156
7.11.59	(5,4,3,3,3,2,2)			
	$\frac{1171}{72} n^6 + \frac{1171}{24} n^5 + \frac{4891}{72} n^4 + \frac{1309}{24} n^3 + \frac{965}{36} n^2 + \frac{23}{3} n + 1$ $1\binom{n}{0} + 222\binom{n}{1} + 3804\binom{n}{2} + 18874\binom{n}{3} + 38712\binom{n}{4} + 35130\binom{n}{5} + 11710\binom{n}{6}$	5040	166	$\frac{1171}{72}$ 11710
7.11.60	(5,4,3,3,3,2,2)			
	$\frac{1481}{90} n^6 + \frac{1481}{30} n^5 + \frac{1243}{18} n^4 + \frac{335}{6} n^3 + \frac{1237}{45} n^2 + \frac{39}{5} n + 1$ $1\binom{n}{0} + 226\binom{n}{1} + 3858\binom{n}{2} + 19112\binom{n}{3} + 39176\binom{n}{4} + 35544\binom{n}{5} + 11848\binom{n}{6}$	5040	163	$\frac{1481}{90}$ 11848
7.11.61	(5,3,3,3,3,3,2)			
	$\frac{233}{15} n^6 + \frac{233}{5} n^5 + \frac{261}{4} n^4 + \frac{317}{6} n^3 + \frac{1573}{60} n^2 + \frac{227}{30} n + 1$ $1\binom{n}{0} + 214\binom{n}{1} + 3644\binom{n}{2} + 18044\binom{n}{3} + 36982\binom{n}{4} + 33552\binom{n}{5} + 11184\binom{n}{6}$	2520	187	$\frac{233}{15}$ 11184
7.11.62	(5,4,4,3,2,2,2)			
	$\frac{3071}{180} n^6 + \frac{3071}{60} n^5 + \frac{1289}{18} n^4 + \frac{695}{12} n^3 + \frac{5099}{180} n^2 + \frac{79}{10} n + 1$ $1\binom{n}{0} + 234\binom{n}{1} + 4000\binom{n}{2} + 19816\binom{n}{3} + 40618\binom{n}{4} + 36852\binom{n}{5} + 12284\binom{n}{6}$	5040	151	$\frac{3071}{180}$ 12284
7.11.63	(5,4,3,3,3,2,2)			
	$\frac{1937}{120} n^6 + \frac{1937}{40} n^5 + \frac{1627}{24} n^4 + \frac{439}{8} n^3 + \frac{406}{15} n^2 + \frac{77}{10} n + 1$ $1\binom{n}{0} + 222\binom{n}{1} + 3786\binom{n}{2} + 18750\binom{n}{3} + 38430\binom{n}{4} + 34866\binom{n}{5} + 11622\binom{n}{6}$	5040	172	$\frac{1937}{120}$ 11622
7.11.64	(6,3,3,3,3,2,2)			
	$\frac{2101}{120} n^6 + \frac{2101}{40} n^5 + \frac{1753}{24} n^4 + \frac{1405}{24} n^3 + \frac{569}{20} n^2 + \frac{119}{15} n + 1$ $1\binom{n}{0} + 238\binom{n}{1} + 4092\binom{n}{2} + 20314\binom{n}{3} + 41672\binom{n}{4} + 37818\binom{n}{5} + 12606\binom{n}{6}$	2520	144	$\frac{2101}{120}$ 12606

7.11.65	(5,5,3,3,2,2,2)	
	$\frac{177}{10} n^6 + \frac{531}{10} n^5 + \frac{445}{6} n^4 + \frac{359}{6} n^3 + \frac{437}{15} n^2 + \frac{121}{15} n + 1$ $1 \binom{n}{0} + 242 \binom{n}{1} + 4146 \binom{n}{2} + 20552 \binom{n}{3} + 42136 \binom{n}{4} + 38232 \binom{n}{5} + 12744 \binom{n}{6}$	1260   $\frac{177}{10}$   12744 136
7.11.66	(5,5,3,3,2,2,2)	
	$\frac{361}{20} n^6 + \frac{1083}{20} n^5 + \frac{151}{2} n^4 + \frac{243}{4} n^3 + \frac{589}{20} n^2 + \frac{81}{10} n + 1$ $1 \binom{n}{0} + 246 \binom{n}{1} + 4224 \binom{n}{2} + 20952 \binom{n}{3} + 42966 \binom{n}{4} + 38988 \binom{n}{5} + 12996 \binom{n}{6}$	2520   $\frac{361}{20}$   12996 135
7.11.67	(5,4,3,3,3,2,2)	
	$\frac{199}{12} n^6 + \frac{199}{4} n^5 + \frac{841}{12} n^4 + \frac{229}{4} n^3 + \frac{85}{3} n^2 + 8n + 1$ $1 \binom{n}{0} + 230 \binom{n}{1} + 3902 \binom{n}{2} + 19284 \binom{n}{3} + 39492 \binom{n}{4} + 35820 \binom{n}{5} + 11940 \binom{n}{6}$	2520   $\frac{199}{12}$   11940 168
7.11.68	(6,4,3,3,2,2,2)	
	$\frac{361}{20} n^6 + \frac{1083}{20} n^5 + \frac{151}{2} n^4 + \frac{243}{4} n^3 + \frac{589}{20} n^2 + \frac{81}{10} n + 1$ $1 \binom{n}{0} + 246 \binom{n}{1} + 4224 \binom{n}{2} + 20952 \binom{n}{3} + 42966 \binom{n}{4} + 38988 \binom{n}{5} + 12996 \binom{n}{6}$	2520   $\frac{361}{20}$   12996 135
7.11.69	(4,4,4,3,3,2,2)	
	$\frac{703}{45} n^6 + \frac{703}{15} n^5 + \frac{2381}{36} n^4 + \frac{325}{6} n^3 + \frac{4903}{180} n^2 + \frac{239}{30} n + 1$ $1 \binom{n}{0} + 218 \binom{n}{1} + 3680 \binom{n}{2} + 18172 \binom{n}{3} + 37206 \binom{n}{4} + 33744 \binom{n}{5} + 11248 \binom{n}{6}$	1260   $\frac{703}{45}$   11248 189
7.11.70	(4,4,3,3,3,3,2)	
	$\frac{224}{15} n^6 + \frac{224}{5} n^5 + 64 n^4 + \frac{160}{3} n^3 + \frac{406}{15} n^2 + \frac{118}{15} n + 1$ $1 \binom{n}{0} + 212 \binom{n}{1} + 3540 \binom{n}{2} + 17408 \binom{n}{3} + 35584 \binom{n}{4} + 32256 \binom{n}{5} + 10752 \binom{n}{6}$	420   $\frac{224}{15}$   10752 216
7.11.71	(5,4,4,3,2,2,2)	
	$\frac{1523}{90} n^6 + \frac{1523}{30} n^5 + \frac{638}{9} n^4 + \frac{343}{6} n^3 + \frac{2537}{90} n^2 + \frac{121}{15} n + 1$ $1 \binom{n}{0} + 232 \binom{n}{1} + 3964 \binom{n}{2} + 19648 \binom{n}{3} + 40284 \binom{n}{4} + 36552 \binom{n}{5} + 12184 \binom{n}{6}$	2520   $\frac{1523}{90}$   12184 154
7.11.72	(5,4,3,3,3,2,2)	
	$\frac{244}{15} n^6 + \frac{244}{5} n^5 + \frac{275}{4} n^4 + \frac{337}{6} n^3 + \frac{1679}{60} n^2 + \frac{241}{30} n + 1$ $1 \binom{n}{0} + 226 \binom{n}{1} + 3828 \binom{n}{2} + 18916 \binom{n}{3} + 38738 \binom{n}{4} + 35136 \binom{n}{5} + 11712 \binom{n}{6}$	2520   $\frac{244}{15}$   11712 171
7.11.73	(5,5,4,2,2,2,2)	
	$\frac{818}{45} n^6 + \frac{818}{15} n^5 + \frac{2737}{36} n^4 + \frac{367}{6} n^3 + \frac{5363}{180} n^2 + \frac{83}{10} n + 1$ $1 \binom{n}{0} + 248 \binom{n}{1} + 4254 \binom{n}{2} + 21100 \binom{n}{3} + 43270 \binom{n}{4} + 39264 \binom{n}{5} + 13088 \binom{n}{6}$	1260   $\frac{818}{45}$   13088 132
7.11.74	(5,5,3,3,2,2,2)	
	$\frac{1043}{60} n^6 + \frac{1043}{20} n^5 + \frac{293}{4} n^4 + \frac{715}{12} n^3 + \frac{881}{30} n^2 + \frac{124}{15} n + 1$ $1 \binom{n}{0} + 240 \binom{n}{1} + 4084 \binom{n}{2} + 20204 \binom{n}{3} + 41392 \binom{n}{4} + 37548 \binom{n}{5} + 12516 \binom{n}{6}$	2520   $\frac{1043}{60}$   12516 148
7.11.75	(5,4,4,3,2,2,2)	
	$\frac{3049}{180} n^6 + \frac{3049}{60} n^5 + \frac{2585}{36} n^4 + \frac{707}{12} n^3 + \frac{2633}{90} n^2 + \frac{124}{15} n + 1$ $1 \binom{n}{0} + 236 \binom{n}{1} + 3992 \binom{n}{2} + 19708 \binom{n}{3} + 40344 \binom{n}{4} + 36588 \binom{n}{5} + 12196 \binom{n}{6}$	2520   $\frac{3049}{180}$   12196 160

7.11.76	(5,5,3,3,2,2,2)	
	$\frac{89}{5} n^6 + \frac{267}{5} n^5 + 76 n^4 + 63 n^3 + \frac{156}{5} n^2 + \frac{43}{5} n + 1$ $1 \binom{n}{0} + 250 \binom{n}{1} + 4210 \binom{n}{2} + 20736 \binom{n}{3} + 42408 \binom{n}{4} + 38448 \binom{n}{5} + 12816 \binom{n}{6}$	630   144 $\frac{89}{5}$   12816
7.11.77	(5,4,3,3,3,2,2)	
	$\frac{1459}{90} n^6 + \frac{1459}{30} n^5 + \frac{622}{9} n^4 + \frac{343}{6} n^3 + \frac{2581}{90} n^2 + \frac{41}{5} n + 1$ $1 \binom{n}{0} + 228 \binom{n}{1} + 3832 \binom{n}{2} + 18880 \binom{n}{3} + 38620 \binom{n}{4} + 35016 \binom{n}{5} + 11672 \binom{n}{6}$	1260   180 $\frac{1459}{90}$   11672
7.11.78	(6,4,4,2,2,2,2)	
	$\frac{559}{30} n^6 + \frac{559}{10} n^5 + \frac{941}{12} n^4 + \frac{191}{3} n^3 + \frac{619}{20} n^2 + \frac{253}{30} n + 1$ $1 \binom{n}{0} + 256 \binom{n}{1} + 4374 \binom{n}{2} + 21652 \binom{n}{3} + 44366 \binom{n}{4} + 40248 \binom{n}{5} + 13416 \binom{n}{6}$	630   128 $\frac{559}{30}$   13416
7.11.79	(6,4,3,3,2,2,2)	
	$\frac{217}{12} n^6 + \frac{217}{4} n^5 + \frac{911}{12} n^4 + \frac{737}{12} n^3 + 30 n^2 + \frac{25}{3} n + 1$ $1 \binom{n}{0} + 248 \binom{n}{1} + 4240 \binom{n}{2} + 21004 \binom{n}{3} + 43052 \binom{n}{4} + 39060 \binom{n}{5} + 13020 \binom{n}{6}$	2520   136 $\frac{217}{12}$   13020
7.11.80	(5,5,3,3,2,2,2)	
	$\frac{529}{30} n^6 + \frac{529}{10} n^5 + \frac{230}{3} n^4 + \frac{391}{6} n^3 + \frac{327}{10} n^2 + \frac{134}{15} n + 1$ $1 \binom{n}{0} + 254 \binom{n}{1} + 4210 \binom{n}{2} + 20608 \binom{n}{3} + 42044 \binom{n}{4} + 38088 \binom{n}{5} + 12696 \binom{n}{6}$	210   160 $\frac{529}{30}$   12696
7.11.81	(6,5,3,2,2,2,2)	
	$\frac{96}{5} n^6 + \frac{288}{5} n^5 + \frac{327}{4} n^4 + \frac{135}{2} n^3 + \frac{661}{20} n^2 + \frac{89}{10} n + 1$ $1 \binom{n}{0} + 268 \binom{n}{1} + 4534 \binom{n}{2} + 22356 \binom{n}{3} + 45738 \binom{n}{4} + 41472 \binom{n}{5} + 13824 \binom{n}{6}$	840   124 $\frac{96}{5}$   13824
7.11.82	(6,6,2,2,2,2,2)	
	$21 n^6 + 63 n^5 + \frac{185}{2} n^4 + 80 n^3 + \frac{79}{2} n^2 + 10 n + 1$ $1 \binom{n}{0} + 306 \binom{n}{1} + 5046 \binom{n}{2} + 24600 \binom{n}{3} + 50100 \binom{n}{4} + 45360 \binom{n}{5} + 15120 \binom{n}{6}$	21   112 21   15120
7.12.1	(4,4,4,3,3,3,3)	
	$\frac{2431}{180} n^6 + \frac{2431}{60} n^5 + \frac{1033}{18} n^4 + \frac{189}{4} n^3 + \frac{4339}{180} n^2 + \frac{217}{30} n + 1$ $1 \binom{n}{0} + 190 \binom{n}{1} + 3188 \binom{n}{2} + 15720 \binom{n}{3} + 32170 \binom{n}{4} + 29172 \binom{n}{5} + 9724 \binom{n}{6}$	1260   360 $\frac{2431}{180}$   9724
7.12.2	(4,4,4,4,2,2)	
	$\frac{293}{20} n^6 + \frac{879}{20} n^5 + \frac{187}{3} n^4 + \frac{617}{12} n^3 + \frac{1561}{60} n^2 + \frac{229}{30} n + 1$ $1 \binom{n}{0} + 206 \binom{n}{1} + 3460 \binom{n}{2} + 17056 \binom{n}{3} + 34898 \binom{n}{4} + 31644 \binom{n}{5} + 10548 \binom{n}{6}$	420   275 $\frac{293}{20}$   10548
7.12.3	(4,4,4,4,3,3,2)	
	$\frac{2459}{180} n^6 + \frac{2459}{60} n^5 + \frac{2089}{36} n^4 + \frac{191}{4} n^3 + \frac{1094}{45} n^2 + \frac{109}{15} n + 1$ $1 \binom{n}{0} + 192 \binom{n}{1} + 3224 \binom{n}{2} + 15900 \binom{n}{3} + 32540 \binom{n}{4} + 29508 \binom{n}{5} + 9836 \binom{n}{6}$	5040   338 $\frac{2459}{180}$   9836
7.12.4	(4,4,4,3,3,3,3)	
	$\frac{596}{45} n^6 + \frac{596}{15} n^5 + \frac{2023}{36} n^4 + \frac{277}{6} n^3 + \frac{4241}{180} n^2 + \frac{71}{10} n + 1$ $1 \binom{n}{0} + 186 \binom{n}{1} + 3124 \binom{n}{2} + 15412 \binom{n}{3} + 31546 \binom{n}{4} + 28608 \binom{n}{5} + 9536 \binom{n}{6}$	2520   368 $\frac{596}{45}$   9536

7.12.5	(4,4,4,4,3,3,2)	
	$\frac{1241}{90} n^6 + \frac{1241}{30} n^5 + \frac{2111}{36} n^4 + \frac{145}{3} n^3 + \frac{4423}{180} n^2 + \frac{73}{10} n + 1$ $1 \binom{n}{0} + 194 \binom{n}{1} + 3256 \binom{n}{2} + 16052 \binom{n}{3} + 32846 \binom{n}{4} + 29784 \binom{n}{5} + 9928 \binom{n}{6}$	$630 \quad \frac{1241}{90}$ $325 \quad 9928$
7.12.6	(4,4,4,3,3,3,3)	
	$\frac{781}{60} n^6 + \frac{781}{20} n^5 + \frac{111}{2} n^4 + \frac{551}{12} n^3 + \frac{1409}{60} n^2 + \frac{211}{30} n + 1$ $1 \binom{n}{0} + 184 \binom{n}{1} + 3078 \binom{n}{2} + 15160 \binom{n}{3} + 31010 \binom{n}{4} + 28116 \binom{n}{5} + 9372 \binom{n}{6}$	$1260 \quad \frac{781}{60}$ $385 \quad 9372$
7.12.7	(4,4,4,4,4,2,2)	
	$\frac{1327}{90} n^6 + \frac{1327}{30} n^5 + \frac{562}{9} n^4 + \frac{307}{6} n^3 + \frac{2323}{90} n^2 + \frac{38}{5} n + 1$ $1 \binom{n}{0} + 206 \binom{n}{1} + 3474 \binom{n}{2} + 17152 \binom{n}{3} + 35116 \binom{n}{4} + 31848 \binom{n}{5} + 10616 \binom{n}{6}$	$1260 \quad \frac{1327}{90}$ $288 \quad 10616$
7.12.8	(4,4,4,3,3,3,3)	
	$\frac{267}{20} n^6 + \frac{801}{20} n^5 + \frac{227}{4} n^4 + \frac{187}{4} n^3 + \frac{239}{10} n^2 + \frac{36}{5} n + 1$ $1 \binom{n}{0} + 188 \binom{n}{1} + 3152 \binom{n}{2} + 15540 \binom{n}{3} + 31800 \binom{n}{4} + 28836 \binom{n}{5} + 9612 \binom{n}{6}$	$840 \quad \frac{267}{20}$ $361 \quad 9612$
7.12.9	(4,4,4,4,3,3,2)	
	$\frac{335}{24} n^6 + \frac{335}{8} n^5 + \frac{1423}{24} n^4 + \frac{1171}{24} n^3 + \frac{99}{4} n^2 + \frac{22}{3} n + 1$ $1 \binom{n}{0} + 196 \binom{n}{1} + 3294 \binom{n}{2} + 16246 \binom{n}{3} + 33248 \binom{n}{4} + 30150 \binom{n}{5} + 10050 \binom{n}{6}$	$5040 \quad \frac{335}{24}$ $329 \quad 10050$
7.12.10	(4,4,4,4,3,3,2)	
	$\frac{72}{5} n^6 + \frac{216}{5} n^5 + \frac{367}{6} n^4 + \frac{151}{3} n^3 + \frac{763}{30} n^2 + \frac{112}{15} n + 1$ $1 \binom{n}{0} + 202 \binom{n}{1} + 3398 \binom{n}{2} + 16760 \binom{n}{3} + 34300 \binom{n}{4} + 31104 \binom{n}{5} + 10368 \binom{n}{6}$	$2520 \quad \frac{72}{5}$ $305 \quad 10368$
7.12.11	(4,4,4,3,3,3,3)	
	$\frac{1187}{90} n^6 + \frac{1187}{30} n^5 + \frac{2021}{36} n^4 + \frac{139}{3} n^3 + \frac{4261}{180} n^2 + \frac{71}{10} n + 1$ $1 \binom{n}{0} + 186 \binom{n}{1} + 3116 \binom{n}{2} + 15356 \binom{n}{3} + 31418 \binom{n}{4} + 28488 \binom{n}{5} + 9496 \binom{n}{6}$	$2520 \quad \frac{1187}{90}$ $377 \quad 9496$
7.12.12	(5,4,4,3,3,3,2)	
	$\frac{917}{60} n^6 + \frac{917}{20} n^5 + \frac{779}{12} n^4 + \frac{641}{12} n^3 + \frac{134}{5} n^2 + \frac{116}{15} n + 1$ $1 \binom{n}{0} + 214 \binom{n}{1} + 3606 \binom{n}{2} + 17788 \binom{n}{3} + 36404 \binom{n}{4} + 33012 \binom{n}{5} + 11004 \binom{n}{6}$	$2520 \quad \frac{917}{60}$ $272 \quad 11004$
7.12.13	(5,4,3,3,3,3,3)	
	$\frac{427}{30} n^6 + \frac{427}{10} n^5 + \frac{121}{2} n^4 + \frac{299}{6} n^3 + \frac{379}{15} n^2 + \frac{112}{15} n + 1$ $1 \binom{n}{0} + 200 \binom{n}{1} + 3360 \binom{n}{2} + 16568 \binom{n}{3} + 33904 \binom{n}{4} + 30744 \binom{n}{5} + 10248 \binom{n}{6}$	$1260 \quad \frac{427}{30}$ $320 \quad 10248$
7.12.14	(5,4,4,4,3,2,2)	
	$\frac{1361}{90} n^6 + \frac{1361}{30} n^5 + \frac{2315}{36} n^4 + 53 n^3 + \frac{4783}{180} n^2 + \frac{229}{30} n + 1$ $1 \binom{n}{0} + 212 \binom{n}{1} + 3570 \binom{n}{2} + 17604 \binom{n}{3} + 36022 \binom{n}{4} + 32664 \binom{n}{5} + 10888 \binom{n}{6}$	$2520 \quad \frac{1361}{90}$ $260 \quad 10888$
7.12.15	(5,4,4,3,3,3,2)	
	$\frac{2629}{180} n^6 + \frac{2629}{60} n^5 + \frac{557}{9} n^4 + \frac{203}{4} n^3 + \frac{4591}{180} n^2 + \frac{223}{30} n + 1$ $1 \binom{n}{0} + 204 \binom{n}{1} + 3442 \binom{n}{2} + 16992 \binom{n}{3} + 34786 \binom{n}{4} + 31548 \binom{n}{5} + 10516 \binom{n}{6}$	$5040 \quad \frac{2629}{180}$ $297 \quad 10516$

7.12.16	(5,4,4,4,3,2,2)	
	$\frac{559}{36} n^6 + \frac{559}{12} n^5 + \frac{595}{9} n^4 + \frac{655}{12} n^3 + \frac{985}{36} n^2 + \frac{47}{6} n + 1$ $1 \binom{n}{0} + 218 \binom{n}{1} + 3668 \binom{n}{2} + 18080 \binom{n}{3} + 36990 \binom{n}{4} + 33540 \binom{n}{5} + 11180 \binom{n}{6}$	$2520 \quad 260$ $\frac{559}{36} \quad 11180$
7.12.17	(5,4,4,3,3,3,2)	
	$\frac{72}{5} n^6 + \frac{216}{5} n^5 + \frac{367}{6} n^4 + \frac{151}{3} n^3 + \frac{763}{30} n^2 + \frac{112}{15} n + 1$ $1 \binom{n}{0} + 202 \binom{n}{1} + 3398 \binom{n}{2} + 16760 \binom{n}{3} + 34300 \binom{n}{4} + 31104 \binom{n}{5} + 10368 \binom{n}{6}$	$2520 \quad 305$ $\frac{72}{5} \quad 10368$
7.12.18	(4,4,4,4,3,3,2)	
	$\frac{4877}{360} n^6 + \frac{4877}{120} n^5 + \frac{4165}{72} n^4 + \frac{1151}{24} n^3 + \frac{4429}{180} n^2 + \frac{37}{5} n + 1$ $1 \binom{n}{0} + 192 \binom{n}{1} + 3206 \binom{n}{2} + 15782 \binom{n}{3} + 32276 \binom{n}{4} + 29262 \binom{n}{5} + 9754 \binom{n}{6}$	$5040 \quad 354$ $\frac{4877}{360} \quad 9754$
7.12.19	(4,4,4,4,4,2,2)	
	$\frac{847}{60} n^6 + \frac{847}{20} n^5 + \frac{181}{3} n^4 + \frac{601}{12} n^3 + \frac{511}{20} n^2 + \frac{227}{30} n + 1$ $1 \binom{n}{0} + 200 \binom{n}{1} + 3342 \binom{n}{2} + 16448 \binom{n}{3} + 33634 \binom{n}{4} + 30492 \binom{n}{5} + 10164 \binom{n}{6}$	$1260 \quad 315$ $\frac{847}{60} \quad 10164$
7.12.20	(4,4,4,3,3,3,3)	
	$\frac{4693}{360} n^6 + \frac{4693}{120} n^5 + \frac{3995}{72} n^4 + \frac{1099}{24} n^3 + \frac{2113}{90} n^2 + \frac{71}{10} n + 1$ $1 \binom{n}{0} + 184 \binom{n}{1} + 3080 \binom{n}{2} + 15178 \binom{n}{3} + 31054 \binom{n}{4} + 28158 \binom{n}{5} + 9386 \binom{n}{6}$	$5040 \quad 386$ $\frac{4693}{360} \quad 9386$
7.12.21	(4,4,4,4,3,3,2)	
	$\frac{269}{20} n^6 + \frac{807}{20} n^5 + \frac{172}{3} n^4 + \frac{569}{12} n^3 + \frac{1453}{60} n^2 + \frac{217}{30} n + 1$ $1 \binom{n}{0} + 190 \binom{n}{1} + 3180 \binom{n}{2} + 15664 \binom{n}{3} + 32042 \binom{n}{4} + 29052 \binom{n}{5} + 9684 \binom{n}{6}$	$2520 \quad 355$ $\frac{269}{20} \quad 9684$
7.12.22	(4,4,4,3,3,3,3)	
	$\frac{773}{60} n^6 + \frac{773}{20} n^5 + \frac{329}{6} n^4 + \frac{181}{4} n^3 + \frac{1397}{60} n^2 + \frac{71}{10} n + 1$ $1 \binom{n}{0} + 182 \binom{n}{1} + 3044 \binom{n}{2} + 15000 \binom{n}{3} + 30690 \binom{n}{4} + 27828 \binom{n}{5} + 9276 \binom{n}{6}$	$840 \quad 392$ $\frac{773}{60} \quad 9276$
7.12.23	(4,4,4,3,3,3,3)	
	$\frac{577}{45} n^6 + \frac{577}{15} n^5 + \frac{1973}{36} n^4 + \frac{91}{2} n^3 + \frac{4207}{180} n^2 + \frac{211}{30} n + 1$ $1 \binom{n}{0} + 182 \binom{n}{1} + 3036 \binom{n}{2} + 14940 \binom{n}{3} + 30550 \binom{n}{4} + 27696 \binom{n}{5} + 9232 \binom{n}{6}$	$2520 \quad 400$ $\frac{577}{45} \quad 9232$
7.12.24	(4,4,4,4,3,3,2)	
	$\frac{247}{18} n^6 + \frac{247}{6} n^5 + \frac{527}{9} n^4 + \frac{97}{2} n^3 + \frac{445}{18} n^2 + \frac{22}{3} n + 1$ $1 \binom{n}{0} + 194 \binom{n}{1} + 3246 \binom{n}{2} + 15984 \binom{n}{3} + 32692 \binom{n}{4} + 29640 \binom{n}{5} + 9880 \binom{n}{6}$	$1260 \quad 345$ $\frac{247}{18} \quad 9880$
7.12.25	(4,4,4,4,3,3,2)	
	$\frac{2447}{180} n^6 + \frac{2447}{60} n^5 + \frac{1043}{18} n^4 + \frac{575}{12} n^3 + \frac{4403}{180} n^2 + \frac{73}{10} n + 1$ $1 \binom{n}{0} + 192 \binom{n}{1} + 3214 \binom{n}{2} + 15832 \binom{n}{3} + 32386 \binom{n}{4} + 29364 \binom{n}{5} + 9788 \binom{n}{6}$	$2520 \quad 340$ $\frac{2447}{180} \quad 9788$
7.12.26	(4,4,4,4,3,3,2)	
	$\frac{646}{45} n^6 + \frac{646}{15} n^5 + \frac{554}{9} n^4 + \frac{154}{3} n^3 + \frac{1174}{45} n^2 + \frac{38}{5} n + 1$ $1 \binom{n}{0} + 204 \binom{n}{1} + 3404 \binom{n}{2} + 16736 \binom{n}{3} + 34208 \binom{n}{4} + 31008 \binom{n}{5} + 10336 \binom{n}{6}$	$630 \quad 320$ $\frac{646}{45} \quad 10336$

7.12.27	(4,4,4,4,3,3,2)	
	$\frac{1231}{90} n^6 + \frac{1231}{30} n^5 + \frac{2107}{36} n^4 + \frac{146}{3} n^3 + \frac{4463}{180} n^2 + \frac{73}{10} n + 1$ $1\binom{n}{0} + 194\binom{n}{1} + 3240\binom{n}{2} + 15940\binom{n}{3} + 32590\binom{n}{4} + 29544\binom{n}{5} + 9848\binom{n}{6}$	$\left  \begin{array}{c} 2520 \\ \frac{1231}{90} \end{array} \right  \begin{array}{c} 344 \\ 9848 \end{array}$
7.12.28	(4,4,4,4,4,2,2)	
	$\frac{637}{45} n^6 + \frac{637}{15} n^5 + \frac{548}{9} n^4 + 51 n^3 + \frac{1168}{45} n^2 + \frac{113}{15} n + 1$ $1\binom{n}{0} + 202\binom{n}{1} + 3362\binom{n}{2} + 16512\binom{n}{3} + 33736\binom{n}{4} + 30576\binom{n}{5} + 10192\binom{n}{6}$	$\left  \begin{array}{c} 630 \\ \frac{637}{45} \end{array} \right  \begin{array}{c} 320 \\ 10192 \end{array}$
7.12.29	(4,4,4,4,3,3,2)	
	$\frac{203}{15} n^6 + \frac{203}{5} n^5 + \frac{175}{3} n^4 + 49 n^3 + \frac{377}{15} n^2 + \frac{37}{5} n + 1$ $1\binom{n}{0} + 194\binom{n}{1} + 3218\binom{n}{2} + 15792\binom{n}{3} + 32256\binom{n}{4} + 29232\binom{n}{5} + 9744\binom{n}{6}$	$\left  \begin{array}{c} 1260 \\ \frac{203}{15} \end{array} \right  \begin{array}{c} 360 \\ 9744 \end{array}$
7.12.30	(4,4,4,3,3,3,3)	
	$\frac{578}{45} n^6 + \frac{578}{15} n^5 + \frac{995}{18} n^4 + \frac{139}{3} n^3 + \frac{2149}{90} n^2 + \frac{107}{15} n + 1$ $1\binom{n}{0} + 184\binom{n}{1} + 3052\binom{n}{2} + 14984\binom{n}{3} + 30612\binom{n}{4} + 27744\binom{n}{5} + 9248\binom{n}{6}$	$\left  \begin{array}{c} 1260 \\ \frac{578}{45} \end{array} \right  \begin{array}{c} 408 \\ 9248 \end{array}$
7.12.31	(4,4,4,4,3,3,2)	
	$\frac{611}{45} n^6 + \frac{611}{15} n^5 + \frac{1043}{18} n^4 + 48 n^3 + \frac{2203}{90} n^2 + \frac{109}{15} n + 1$ $1\binom{n}{0} + 192\binom{n}{1} + 3212\binom{n}{2} + 15816\binom{n}{3} + 32348\binom{n}{4} + 29328\binom{n}{5} + 9776\binom{n}{6}$	$\left  \begin{array}{c} 1260 \\ \frac{611}{45} \end{array} \right  \begin{array}{c} 352 \\ 9776 \end{array}$
7.12.32	(4,4,4,4,3,3,2)	
	$\frac{623}{45} n^6 + \frac{623}{15} n^5 + \frac{2113}{36} n^4 + \frac{289}{6} n^3 + \frac{4403}{180} n^2 + \frac{73}{10} n + 1$ $1\binom{n}{0} + 194\binom{n}{1} + 3264\binom{n}{2} + 16108\binom{n}{3} + 32974\binom{n}{4} + 29904\binom{n}{5} + 9968\binom{n}{6}$	$\left  \begin{array}{c} 2520 \\ \frac{623}{45} \end{array} \right  \begin{array}{c} 335 \\ 9968 \end{array}$
7.12.33	(5,4,4,3,3,3,2)	
	$\frac{1289}{90} n^6 + \frac{1289}{30} n^5 + \frac{2183}{36} n^4 + \frac{149}{3} n^3 + \frac{4507}{180} n^2 + \frac{221}{30} n + 1$ $1\binom{n}{0} + 200\binom{n}{1} + 3374\binom{n}{2} + 16660\binom{n}{3} + 34110\binom{n}{4} + 30936\binom{n}{5} + 10312\binom{n}{6}$	$\left  \begin{array}{c} 2520 \\ \frac{1289}{90} \end{array} \right  \begin{array}{c} 308 \\ 10312 \end{array}$
7.12.34	(5,4,4,3,3,3,2)	
	$\frac{5081}{360} n^6 + \frac{5081}{120} n^5 + \frac{4315}{72} n^4 + \frac{1183}{24} n^3 + \frac{1123}{45} n^2 + \frac{221}{30} n + 1$ $1\binom{n}{0} + 198\binom{n}{1} + 3330\binom{n}{2} + 16426\binom{n}{3} + 33618\binom{n}{4} + 30486\binom{n}{5} + 10162\binom{n}{6}$	$\left  \begin{array}{c} 5040 \\ \frac{5081}{360} \end{array} \right  \begin{array}{c} 313 \\ 10162 \end{array}$
7.12.35	(5,4,4,3,3,3,2)	
	$\frac{853}{60} n^6 + \frac{853}{20} n^5 + \frac{121}{2} n^4 + \frac{599}{12} n^3 + \frac{1517}{60} n^2 + \frac{223}{30} n + 1$ $1\binom{n}{0} + 200\binom{n}{1} + 3358\binom{n}{2} + 16552\binom{n}{3} + 33866\binom{n}{4} + 30708\binom{n}{5} + 10236\binom{n}{6}$	$\left  \begin{array}{c} 2520 \\ \frac{853}{60} \end{array} \right  \begin{array}{c} 308 \\ 10236 \end{array}$
7.12.36	(5,4,3,3,3,3,3)	
	$\frac{487}{36} n^6 + \frac{487}{12} n^5 + \frac{517}{9} n^4 + \frac{189}{4} n^3 + \frac{865}{36} n^2 + \frac{43}{6} n + 1$ $1\binom{n}{0} + 190\binom{n}{1} + 3192\binom{n}{2} + 15744\binom{n}{3} + 32222\binom{n}{4} + 29220\binom{n}{5} + 9740\binom{n}{6}$	$\left  \begin{array}{c} 5040 \\ \frac{487}{36} \end{array} \right  \begin{array}{c} 353 \\ 9740 \end{array}$
7.12.37	(5,4,4,3,3,3,2)	
	$\frac{419}{30} n^6 + \frac{419}{10} n^5 + \frac{178}{3} n^4 + \frac{293}{6} n^3 + \frac{247}{10} n^2 + \frac{109}{15} n + 1$ $1\binom{n}{0} + 196\binom{n}{1} + 3296\binom{n}{2} + 16256\binom{n}{3} + 33268\binom{n}{4} + 30168\binom{n}{5} + 10056\binom{n}{6}$	$\left  \begin{array}{c} 2520 \\ \frac{419}{30} \end{array} \right  \begin{array}{c} 323 \\ 10056 \end{array}$

7.12.38	(5,4,4,4,3,2,2)	
	$\frac{591}{40} n^6 + \frac{1773}{40} n^5 + \frac{1511}{24} n^4 + \frac{1249}{24} n^3 + \frac{394}{15} n^2 + \frac{229}{30} n + 1$ $1 \binom{n}{0} + 208 \binom{n}{1} + 3492 \binom{n}{2} + 17206 \binom{n}{3} + 35198 \binom{n}{4} + 31914 \binom{n}{5} + 10638 \binom{n}{6}$	5040   284 $\frac{591}{40}$   10638
7.12.39	(5,4,4,3,3,3,2)	
	$\frac{839}{60} n^6 + \frac{839}{20} n^5 + \frac{178}{3} n^4 + \frac{195}{4} n^3 + \frac{1481}{60} n^2 + \frac{73}{10} n + 1$ $1 \binom{n}{0} + 196 \binom{n}{1} + 3298 \binom{n}{2} + 16272 \binom{n}{3} + 33306 \binom{n}{4} + 30204 \binom{n}{5} + 10068 \binom{n}{6}$	5040   326 $\frac{839}{60}$   10068
7.12.40	(5,4,4,3,3,3,2)	
	$\frac{253}{18} n^6 + \frac{253}{6} n^5 + \frac{539}{9} n^4 + \frac{99}{2} n^3 + \frac{451}{18} n^2 + \frac{22}{3} n + 1$ $1 \binom{n}{0} + 198 \binom{n}{1} + 3322 \binom{n}{2} + 16368 \binom{n}{3} + 33484 \binom{n}{4} + 30360 \binom{n}{5} + 10120 \binom{n}{6}$	5040   320 $\frac{253}{18}$   10120
7.12.41	(5,4,3,3,3,3,3)	
	$\frac{799}{60} n^6 + \frac{799}{20} n^5 + \frac{227}{4} n^4 + \frac{563}{12} n^3 + \frac{359}{15} n^2 + \frac{107}{15} n + 1$ $1 \binom{n}{0} + 188 \binom{n}{1} + 3148 \binom{n}{2} + 15508 \binom{n}{3} + 31724 \binom{n}{4} + 28764 \binom{n}{5} + 9588 \binom{n}{6}$	2520   368 $\frac{799}{60}$   9588
7.12.42	(6,3,3,3,3,3,3)	
	$\frac{283}{20} n^6 + \frac{849}{20} n^5 + 60 n^4 + \frac{197}{4} n^3 + \frac{497}{20} n^2 + \frac{73}{10} n + 1$ $1 \binom{n}{0} + 198 \binom{n}{1} + 3336 \binom{n}{2} + 16464 \binom{n}{3} + 33702 \binom{n}{4} + 30564 \binom{n}{5} + 10188 \binom{n}{6}$	420   320 $\frac{283}{20}$   10188
7.12.43	(5,4,4,4,3,2,2)	
	$\frac{664}{45} n^6 + \frac{664}{15} n^5 + \frac{2249}{36} n^4 + \frac{307}{6} n^3 + \frac{4639}{180} n^2 + \frac{227}{30} n + 1$ $1 \binom{n}{0} + 206 \binom{n}{1} + 3476 \binom{n}{2} + 17164 \binom{n}{3} + 35142 \binom{n}{4} + 31872 \binom{n}{5} + 10624 \binom{n}{6}$	2520   287 $\frac{664}{45}$   10624
7.12.44	(5,4,4,4,3,2,2)	
	$\frac{2657}{180} n^6 + \frac{2657}{60} n^5 + \frac{1133}{18} n^4 + \frac{625}{12} n^3 + \frac{4733}{180} n^2 + \frac{229}{30} n + 1$ $1 \binom{n}{0} + 208 \binom{n}{1} + 3490 \binom{n}{2} + 17192 \binom{n}{3} + 35166 \binom{n}{4} + 31884 \binom{n}{5} + 10628 \binom{n}{6}$	2520   285 $\frac{2657}{180}$   10628
7.12.45	(5,4,4,3,3,3,2)	
	$\frac{5069}{360} n^6 + \frac{5069}{120} n^5 + \frac{4309}{72} n^4 + \frac{1183}{24} n^3 + \frac{4513}{180} n^2 + \frac{112}{15} n + 1$ $1 \binom{n}{0} + 198 \binom{n}{1} + 3324 \binom{n}{2} + 16390 \binom{n}{3} + 33540 \binom{n}{4} + 30414 \binom{n}{5} + 10138 \binom{n}{6}$	5040   324 $\frac{5069}{360}$   10138
7.12.46	(5,4,4,4,3,2,2)	
	$\frac{587}{40} n^6 + \frac{1761}{40} n^5 + \frac{499}{8} n^4 + \frac{411}{8} n^3 + \frac{519}{20} n^2 + \frac{38}{5} n + 1$ $1 \binom{n}{0} + 206 \binom{n}{1} + 3464 \binom{n}{2} + 17082 \binom{n}{3} + 34956 \binom{n}{4} + 31698 \binom{n}{5} + 10566 \binom{n}{6}$	5040   289 $\frac{587}{40}$   10566
7.12.47	(5,4,4,4,3,2,2)	
	$\frac{539}{36} n^6 + \frac{539}{12} n^5 + \frac{2291}{36} n^4 + \frac{629}{12} n^3 + \frac{475}{18} n^2 + \frac{23}{3} n + 1$ $1 \binom{n}{0} + 210 \binom{n}{1} + 3534 \binom{n}{2} + 17428 \binom{n}{3} + 35664 \binom{n}{4} + 32340 \binom{n}{5} + 10780 \binom{n}{6}$	5040   281 $\frac{539}{36}$   10780
7.12.48	(5,4,4,3,3,3,2)	
	$\frac{85}{6} n^6 + \frac{85}{2} n^5 + \frac{725}{12} n^4 + 50 n^3 + \frac{305}{12} n^2 + \frac{15}{2} n + 1$ $1 \binom{n}{0} + 200 \binom{n}{1} + 3350 \binom{n}{2} + 16500 \binom{n}{3} + 33750 \binom{n}{4} + 30600 \binom{n}{5} + 10200 \binom{n}{6}$	5040   321 $\frac{85}{6}$   10200

7.12.49	(5,4,4,3,3,3,2)	
	$\frac{5039}{360} n^6 + \frac{5039}{120} n^5 + \frac{4303}{72} n^4 + \frac{1189}{24} n^3 + \frac{4543}{180} n^2 + \frac{112}{15} n + 1$ $1 \binom{n}{0} + 198 \binom{n}{1} + 3312 \binom{n}{2} + 16306 \binom{n}{3} + 33348 \binom{n}{4} + 30234 \binom{n}{5} + 10078 \binom{n}{6}$	$5040 \quad 324$ $\frac{5039}{360} \quad 10078$
7.12.50	(4,4,4,3,3,3,3)	
	$\frac{194}{15} n^6 + \frac{194}{5} n^5 + \frac{166}{3} n^4 + 46 n^3 + \frac{356}{15} n^2 + \frac{36}{5} n + 1$ $1 \binom{n}{0} + 184 \binom{n}{1} + 3064 \binom{n}{2} + 15072 \binom{n}{3} + 30816 \binom{n}{4} + 27936 \binom{n}{5} + 9312 \binom{n}{6}$	$1260 \quad 399$ $\frac{194}{15} \quad 9312$
7.12.51	(5,4,4,3,3,3,2)	
	$\frac{626}{45} n^6 + \frac{626}{15} n^5 + \frac{2131}{36} n^4 + \frac{293}{6} n^3 + \frac{4481}{180} n^2 + \frac{223}{30} n + 1$ $1 \binom{n}{0} + 196 \binom{n}{1} + 3286 \binom{n}{2} + 16196 \binom{n}{3} + 33138 \binom{n}{4} + 30048 \binom{n}{5} + 10016 \binom{n}{6}$	$2520 \quad 330$ $\frac{626}{45} \quad 10016$
7.12.52	(5,4,4,3,3,3,2)	
	$\frac{2503}{180} n^6 + \frac{2503}{60} n^5 + \frac{533}{9} n^4 + \frac{587}{12} n^3 + \frac{4477}{180} n^2 + \frac{221}{30} n + 1$ $1 \binom{n}{0} + 196 \binom{n}{1} + 3286 \binom{n}{2} + 16192 \binom{n}{3} + 33126 \binom{n}{4} + 30036 \binom{n}{5} + 10012 \binom{n}{6}$	$2520 \quad 327$ $\frac{2503}{180} \quad 10012$
7.12.53	(5,4,3,3,3,3,3)	
	$\frac{1193}{90} n^6 + \frac{1193}{30} n^5 + \frac{2039}{36} n^4 + 47 n^3 + \frac{4339}{180} n^2 + \frac{217}{30} n + 1$ $1 \binom{n}{0} + 188 \binom{n}{1} + 3138 \binom{n}{2} + 15444 \binom{n}{3} + 31582 \binom{n}{4} + 28632 \binom{n}{5} + 9544 \binom{n}{6}$	$2520 \quad 372$ $\frac{1193}{90} \quad 9544$
7.12.54	(5,4,4,3,3,3,2)	
	$\frac{83}{6} n^6 + \frac{83}{2} n^5 + \frac{355}{6} n^4 + \frac{295}{6} n^3 + 25 n^2 + \frac{22}{3} n + 1$ $1 \binom{n}{0} + 196 \binom{n}{1} + 3276 \binom{n}{2} + 16120 \binom{n}{3} + 32960 \binom{n}{4} + 29880 \binom{n}{5} + 9960 \binom{n}{6}$	$1260 \quad 336$ $\frac{83}{6} \quad 9960$
7.12.55	(5,4,4,4,3,2,2)	
	$\frac{1321}{90} n^6 + \frac{1321}{30} n^5 + \frac{2263}{36} n^4 + \frac{157}{3} n^3 + \frac{4763}{180} n^2 + \frac{229}{30} n + 1$ $1 \binom{n}{0} + 208 \binom{n}{1} + 3478 \binom{n}{2} + 17108 \binom{n}{3} + 34974 \binom{n}{4} + 31704 \binom{n}{5} + 10568 \binom{n}{6}$	$2520 \quad 296$ $\frac{1321}{90} \quad 10568$
7.12.56	(5,4,4,3,3,3,2)	
	$\frac{499}{36} n^6 + \frac{499}{12} n^5 + \frac{2131}{36} n^4 + \frac{589}{12} n^3 + \frac{449}{18} n^2 + \frac{22}{3} n + 1$ $1 \binom{n}{0} + 196 \binom{n}{1} + 3280 \binom{n}{2} + 16148 \binom{n}{3} + 33024 \binom{n}{4} + 29940 \binom{n}{5} + 9980 \binom{n}{6}$	$2520 \quad 336$ $\frac{499}{36} \quad 9980$
7.12.57	(5,5,4,3,3,2,2)	
	$\frac{1367}{90} n^6 + \frac{1367}{30} n^5 + \frac{1165}{18} n^4 + \frac{107}{2} n^3 + \frac{1219}{45} n^2 + \frac{119}{15} n + 1$ $1 \binom{n}{0} + 214 \binom{n}{1} + 3590 \binom{n}{2} + 17688 \binom{n}{3} + 36184 \binom{n}{4} + 32808 \binom{n}{5} + 10936 \binom{n}{6}$	$1260 \quad 276$ $\frac{1367}{90} \quad 10936$
7.12.58	(5,5,4,4,2,2,2)	
	$\frac{293}{18} n^6 + \frac{293}{6} n^5 + \frac{631}{9} n^4 + \frac{353}{6} n^3 + \frac{533}{18} n^2 + \frac{25}{3} n + 1$ $1 \binom{n}{0} + 232 \binom{n}{1} + 3868 \binom{n}{2} + 18992 \binom{n}{3} + 38796 \binom{n}{4} + 35160 \binom{n}{5} + 11720 \binom{n}{6}$	$630 \quad 240$ $\frac{293}{18} \quad 11720$
7.12.59	(5,4,4,4,3,2,2)	
	$\frac{661}{45} n^6 + \frac{661}{15} n^5 + \frac{569}{9} n^4 + 53 n^3 + \frac{1219}{45} n^2 + \frac{119}{15} n + 1$ $1 \binom{n}{0} + 210 \binom{n}{1} + 3490 \binom{n}{2} + 17136 \binom{n}{3} + 35008 \binom{n}{4} + 31728 \binom{n}{5} + 10576 \binom{n}{6}$	$1260 \quad 300$ $\frac{661}{45} \quad 10576$

7.12.60	(5,5,4,3,3,2,2)			
	$\frac{307}{20} n^6 + \frac{921}{20} n^5 + 65 n^4 + \frac{213}{4} n^3 + \frac{533}{20} n^2 + \frac{77}{10} n + 1$ $1 \binom{n}{0} + 214 \binom{n}{1} + 3616 \binom{n}{2} + 17856 \binom{n}{3} + 36558 \binom{n}{4} + 33156 \binom{n}{5} + 11052 \binom{n}{6}$	1260	264	$\frac{307}{20}$ 11052
7.12.61	(5,5,3,3,3,3,2)			
	$\frac{439}{30} n^6 + \frac{439}{10} n^5 + \frac{187}{3} n^4 + \frac{103}{2} n^3 + \frac{781}{30} n^2 + \frac{38}{5} n + 1$ $1 \binom{n}{0} + 206 \binom{n}{1} + 3458 \binom{n}{2} + 17040 \binom{n}{3} + 34860 \binom{n}{4} + 31608 \binom{n}{5} + 10536 \binom{n}{6}$	2520	296	$\frac{439}{30}$ 10536
7.12.62	(5,4,4,3,3,3,2)			
	$\frac{143}{10} n^6 + \frac{429}{10} n^5 + 61 n^4 + \frac{101}{2} n^3 + \frac{257}{10} n^2 + \frac{38}{5} n + 1$ $1 \binom{n}{0} + 202 \binom{n}{1} + 3382 \binom{n}{2} + 16656 \binom{n}{3} + 34068 \binom{n}{4} + 30888 \binom{n}{5} + 10296 \binom{n}{6}$	2520	320	$\frac{143}{10}$ 10296
7.12.63	(5,5,4,3,3,2,2)			
	$\frac{275}{18} n^6 + \frac{275}{6} n^5 + \frac{1169}{18} n^4 + \frac{107}{2} n^3 + \frac{241}{9} n^2 + \frac{23}{3} n + 1$ $1 \binom{n}{0} + 214 \binom{n}{1} + 3606 \binom{n}{2} + 17784 \binom{n}{3} + 36392 \binom{n}{4} + 33000 \binom{n}{5} + 11000 \binom{n}{6}$	1260	255	$\frac{275}{18}$ 11000
7.12.64	(5,5,4,3,3,2,2)			
	$\frac{5609}{360} n^6 + \frac{5609}{120} n^5 + \frac{4765}{72} n^4 + \frac{1307}{24} n^3 + \frac{4903}{180} n^2 + \frac{39}{5} n + 1$ $1 \binom{n}{0} + 218 \binom{n}{1} + 3676 \binom{n}{2} + 18134 \binom{n}{3} + 37112 \binom{n}{4} + 33654 \binom{n}{5} + 11218 \binom{n}{6}$	5040	257	$\frac{5609}{360}$ 11218
7.12.65	(5,5,3,3,3,3,2)			
	$\frac{297}{20} n^6 + \frac{891}{20} n^5 + \frac{757}{12} n^4 + \frac{623}{12} n^3 + \frac{391}{15} n^2 + \frac{113}{15} n + 1$ $1 \binom{n}{0} + 208 \binom{n}{1} + 3504 \binom{n}{2} + 17284 \binom{n}{3} + 35372 \binom{n}{4} + 32076 \binom{n}{5} + 10692 \binom{n}{6}$	2520	288	$\frac{297}{20}$ 10692
7.12.66	(5,4,4,3,3,3,2)			
	$\frac{1289}{90} n^6 + \frac{1289}{30} n^5 + \frac{1099}{18} n^4 + \frac{101}{2} n^3 + \frac{1153}{45} n^2 + \frac{113}{15} n + 1$ $1 \binom{n}{0} + 202 \binom{n}{1} + 3386 \binom{n}{2} + 16680 \binom{n}{3} + 34120 \binom{n}{4} + 30936 \binom{n}{5} + 10312 \binom{n}{6}$	2520	315	$\frac{1289}{90}$ 10312
7.12.67	(5,5,3,3,3,3,2)			
	$\frac{149}{10} n^6 + \frac{447}{10} n^5 + 64 n^4 + \frac{107}{2} n^3 + \frac{271}{10} n^2 + \frac{39}{5} n + 1$ $1 \binom{n}{0} + 212 \binom{n}{1} + 3536 \binom{n}{2} + 17376 \binom{n}{3} + 35508 \binom{n}{4} + 32184 \binom{n}{5} + 10728 \binom{n}{6}$	630	288	$\frac{149}{10}$ 10728
7.12.68	(5,4,3,3,3,3,3)			
	$\frac{614}{45} n^6 + \frac{614}{15} n^5 + \frac{526}{9} n^4 + \frac{146}{3} n^3 + \frac{1121}{45} n^2 + \frac{37}{5} n + 1$ $1 \binom{n}{0} + 194 \binom{n}{1} + 3234 \binom{n}{2} + 15904 \binom{n}{3} + 32512 \binom{n}{4} + 29472 \binom{n}{5} + 9824 \binom{n}{6}$	1260	360	$\frac{614}{45}$ 9824
7.12.69	(6,4,4,3,3,2,2)			
	$\frac{473}{30} n^6 + \frac{473}{10} n^5 + \frac{269}{4} n^4 + \frac{167}{3} n^3 + \frac{1679}{60} n^2 + \frac{241}{30} n + 1$ $1 \binom{n}{0} + 222 \binom{n}{1} + 3728 \binom{n}{2} + 18364 \binom{n}{3} + 37562 \binom{n}{4} + 34056 \binom{n}{5} + 11352 \binom{n}{6}$	1260	256	$\frac{473}{30}$ 11352
7.12.70	(6,4,4,3,3,2,2)			
	$\frac{5609}{360} n^6 + \frac{5609}{120} n^5 + \frac{4765}{72} n^4 + \frac{1307}{24} n^3 + \frac{4903}{180} n^2 + \frac{39}{5} n + 1$ $1 \binom{n}{0} + 218 \binom{n}{1} + 3676 \binom{n}{2} + 18134 \binom{n}{3} + 37112 \binom{n}{4} + 33654 \binom{n}{5} + 11218 \binom{n}{6}$	5040	257	$\frac{5609}{360}$ 11218

7.12.71	(6,4,3,3,3,3,2)			
	$\frac{917}{60} n^6 + \frac{917}{20} n^5 + \frac{779}{12} n^4 + \frac{641}{12} n^3 + \frac{134}{5} n^2 + \frac{116}{15} n + 1$ $1\binom{n}{0} + 214\binom{n}{1} + 3606\binom{n}{2} + 17788\binom{n}{3} + 36404\binom{n}{4} + 33012\binom{n}{5} + 11004\binom{n}{6}$	2520	272	$\frac{917}{60}$ 11004
7.12.72	(6,4,3,3,3,3,2)			
	$\frac{297}{20} n^6 + \frac{891}{20} n^5 + \frac{757}{12} n^4 + \frac{623}{12} n^3 + \frac{391}{15} n^2 + \frac{113}{15} n + 1$ $1\binom{n}{0} + 208\binom{n}{1} + 3504\binom{n}{2} + 17284\binom{n}{3} + 35372\binom{n}{4} + 32076\binom{n}{5} + 10692\binom{n}{6}$	2520	288	$\frac{297}{20}$ 10692
7.12.73	(5,5,4,3,3,2,2)			
	$\frac{1075}{72} n^6 + \frac{1075}{24} n^5 + \frac{4579}{72} n^4 + \frac{1261}{24} n^3 + \frac{953}{36} n^2 + \frac{23}{3} n + 1$ $1\binom{n}{0} + 210\binom{n}{1} + 3528\binom{n}{2} + 17386\binom{n}{3} + 35568\binom{n}{4} + 32250\binom{n}{5} + 10750\binom{n}{6}$	5040	279	$\frac{1075}{72}$ 10750
7.12.74	(5,5,4,4,2,2,2)			
	$\frac{317}{20} n^6 + \frac{951}{20} n^5 + \frac{809}{12} n^4 + \frac{667}{12} n^3 + \frac{416}{15} n^2 + \frac{118}{15} n + 1$ $1\binom{n}{0} + 222\binom{n}{1} + 3742\binom{n}{2} + 18452\binom{n}{3} + 37756\binom{n}{4} + 34236\binom{n}{5} + 11412\binom{n}{6}$	2520	245	$\frac{317}{20}$ 11412
7.12.75	(5,5,4,3,3,2,2)			
	$\frac{1351}{90} n^6 + \frac{1351}{30} n^5 + \frac{2293}{36} n^4 + \frac{157}{3} n^3 + \frac{4733}{180} n^2 + \frac{229}{30} n + 1$ $1\binom{n}{0} + 210\binom{n}{1} + 3540\binom{n}{2} + 17468\binom{n}{3} + 35754\binom{n}{4} + 32424\binom{n}{5} + 10808\binom{n}{6}$	5040	278	$\frac{1351}{90}$ 10808
7.12.76	(5,4,4,4,3,2,2)			
	$\frac{2627}{180} n^6 + \frac{2627}{60} n^5 + \frac{1121}{18} n^4 + \frac{619}{12} n^3 + \frac{4703}{180} n^2 + \frac{229}{30} n + 1$ $1\binom{n}{0} + 206\binom{n}{1} + 3452\binom{n}{2} + 17000\binom{n}{3} + 34770\binom{n}{4} + 31524\binom{n}{5} + 10508\binom{n}{6}$	5040	299	$\frac{2627}{180}$ 10508
7.12.77	(5,5,3,3,3,3,2)			
	$\frac{644}{45} n^6 + \frac{644}{15} n^5 + \frac{2197}{36} n^4 + \frac{101}{2} n^3 + \frac{4619}{180} n^2 + \frac{227}{30} n + 1$ $1\binom{n}{0} + 202\binom{n}{1} + 3384\binom{n}{2} + 16668\binom{n}{3} + 34094\binom{n}{4} + 30912\binom{n}{5} + 10304\binom{n}{6}$	2520	315	$\frac{644}{45}$ 10304
7.12.78	(5,5,4,3,3,2,2)			
	$\frac{2717}{180} n^6 + \frac{2717}{60} n^5 + \frac{2329}{36} n^4 + \frac{647}{12} n^3 + \frac{2449}{90} n^2 + \frac{39}{5} n + 1$ $1\binom{n}{0} + 214\binom{n}{1} + 3578\binom{n}{2} + 17596\binom{n}{3} + 35968\binom{n}{4} + 32604\binom{n}{5} + 10868\binom{n}{6}$	2520	276	$\frac{2717}{180}$ 10868
7.12.79	(5,4,4,3,3,3,2)			
	$\frac{5011}{360} n^6 + \frac{5011}{120} n^5 + \frac{4295}{72} n^4 + \frac{1193}{24} n^3 + \frac{4577}{180} n^2 + \frac{113}{15} n + 1$ $1\binom{n}{0} + 198\binom{n}{1} + 3300\binom{n}{2} + 16226\binom{n}{3} + 33168\binom{n}{4} + 30066\binom{n}{5} + 10022\binom{n}{6}$	5040	339	$\frac{5011}{360}$ 10022
7.12.80	(6,4,4,4,2,2,2)			
	$\frac{159}{10} n^6 + \frac{477}{10} n^5 + \frac{135}{2} n^4 + \frac{111}{2} n^3 + \frac{138}{5} n^2 + \frac{39}{5} n + 1$ $1\binom{n}{0} + 222\binom{n}{1} + 3750\binom{n}{2} + 18504\binom{n}{3} + 37872\binom{n}{4} + 34344\binom{n}{5} + 11448\binom{n}{6}$	840	243	$\frac{159}{10}$ 11448
7.12.81	(6,4,3,3,3,3,2)			
	$\frac{2639}{180} n^6 + \frac{2639}{60} n^5 + \frac{2245}{36} n^4 + \frac{617}{12} n^3 + \frac{1169}{45} n^2 + \frac{38}{5} n + 1$ $1\binom{n}{0} + 206\binom{n}{1} + 3462\binom{n}{2} + 17068\binom{n}{3} + 34924\binom{n}{4} + 31668\binom{n}{5} + 10556\binom{n}{6}$	2520	297	$\frac{2639}{180}$ 10556

7.12.82	(6,4,4,3,3,2,2)	
	$\frac{2743}{180} n^6 + \frac{2743}{60} n^5 + \frac{584}{9} n^4 + \frac{643}{12} n^3 + \frac{4837}{180} n^2 + \frac{77}{10} n + 1$ $1 \binom{n}{0} + 214 \binom{n}{1} + 3600 \binom{n}{2} + 17744 \binom{n}{3} + 36302 \binom{n}{4} + 32916 \binom{n}{5} + 10972 \binom{n}{6}$	$2520$   $272$ $\frac{2743}{180}$   $10972$
7.12.83	(5,5,3,3,3,3,2)	
	$\frac{44}{3} n^6 + 44 n^5 + \frac{191}{3} n^4 + 54 n^3 + \frac{83}{3} n^2 + 8 n + 1$ $1 \binom{n}{0} + 212 \binom{n}{1} + 3500 \binom{n}{2} + 17136 \binom{n}{3} + 34968 \binom{n}{4} + 31680 \binom{n}{5} + 10560 \binom{n}{6}$	$315$   $320$ $\frac{44}{3}$   $10560$
7.12.84	(6,5,3,3,3,2,2)	
	$\frac{961}{60} n^6 + \frac{961}{20} n^5 + \frac{137}{2} n^4 + \frac{683}{12} n^3 + \frac{1709}{60} n^2 + \frac{241}{30} n + 1$ $1 \binom{n}{0} + 226 \binom{n}{1} + 3792 \binom{n}{2} + 18664 \binom{n}{3} + 38162 \binom{n}{4} + 34596 \binom{n}{5} + 11532 \binom{n}{6}$	$2520$   $248$ $\frac{961}{60}$   $11532$
7.12.85	(4,4,4,3,3,3,3)	
	$\frac{64}{5} n^6 + \frac{192}{5} n^5 + 56 n^4 + 48 n^3 + \frac{126}{5} n^2 + \frac{38}{5} n + 1$ $1 \binom{n}{0} + 188 \binom{n}{1} + 3068 \binom{n}{2} + 14976 \binom{n}{3} + 30528 \binom{n}{4} + 27648 \binom{n}{5} + 9216 \binom{n}{6}$	$35$   $432$ $\frac{64}{5}$   $9216$
7.12.86	(5,5,5,3,2,2,2)	
	$\frac{479}{30} n^6 + \frac{479}{10} n^5 + \frac{815}{12} n^4 + 56 n^3 + \frac{1687}{60} n^2 + \frac{81}{10} n + 1$ $1 \binom{n}{0} + 224 \binom{n}{1} + 3770 \binom{n}{2} + 18588 \binom{n}{3} + 38034 \binom{n}{4} + 34488 \binom{n}{5} + 11496 \binom{n}{6}$	$840$   $242$ $\frac{479}{30}$   $11496$
7.12.87	(5,5,4,3,3,2,2)	
	$\frac{134}{9} n^6 + \frac{134}{3} n^5 + \frac{575}{9} n^4 + \frac{160}{3} n^3 + \frac{245}{9} n^2 + 8 n + 1$ $1 \binom{n}{0} + 212 \binom{n}{1} + 3532 \binom{n}{2} + 17360 \binom{n}{3} + 35480 \binom{n}{4} + 32160 \binom{n}{5} + 10720 \binom{n}{6}$	$2520$   $291$ $\frac{134}{9}$   $10720$
7.12.88	(5,5,3,3,3,3,2)	
	$\frac{143}{10} n^6 + \frac{429}{10} n^5 + \frac{371}{6} n^4 + \frac{313}{6} n^3 + \frac{403}{15} n^2 + \frac{119}{15} n + 1$ $1 \binom{n}{0} + 206 \binom{n}{1} + 3406 \binom{n}{2} + 16696 \binom{n}{3} + 34088 \binom{n}{4} + 30888 \binom{n}{5} + 10296 \binom{n}{6}$	$420$   $324$ $\frac{143}{10}$   $10296$
7.12.89	(5,4,4,3,3,3,2)	
	$\frac{277}{20} n^6 + \frac{831}{20} n^5 + \frac{719}{12} n^4 + \frac{607}{12} n^3 + \frac{787}{30} n^2 + \frac{118}{15} n + 1$ $1 \binom{n}{0} + 200 \binom{n}{1} + 3300 \binom{n}{2} + 16172 \binom{n}{3} + 33016 \binom{n}{4} + 29916 \binom{n}{5} + 9972 \binom{n}{6}$	$840$   $351$ $\frac{277}{20}$   $9972$
7.12.90	(6,4,4,3,3,2,2)	
	$\frac{275}{18} n^6 + \frac{275}{6} n^5 + \frac{1175}{18} n^4 + \frac{325}{6} n^3 + \frac{247}{9} n^2 + 8 n + 1$ $1 \binom{n}{0} + 216 \binom{n}{1} + 3616 \binom{n}{2} + 17800 \binom{n}{3} + 36400 \binom{n}{4} + 33000 \binom{n}{5} + 11000 \binom{n}{6}$	$1260$   $273$ $\frac{275}{18}$   $11000$
7.12.91	(5,5,4,3,3,2,2)	
	$\frac{676}{45} n^6 + \frac{676}{15} n^5 + \frac{1177}{18} n^4 + \frac{167}{3} n^3 + \frac{2573}{90} n^2 + \frac{124}{15} n + 1$ $1 \binom{n}{0} + 218 \binom{n}{1} + 3590 \binom{n}{2} + 17560 \binom{n}{3} + 35820 \binom{n}{4} + 32448 \binom{n}{5} + 10816 \binom{n}{6}$	$630$   $300$ $\frac{676}{45}$   $10816$
7.12.92	(6,5,4,3,2,2,2)	
	$\frac{2947}{180} n^6 + \frac{2947}{60} n^5 + \frac{632}{9} n^4 + \frac{703}{12} n^3 + \frac{5293}{180} n^2 + \frac{83}{10} n + 1$ $1 \binom{n}{0} + 232 \binom{n}{1} + 3882 \binom{n}{2} + 19088 \binom{n}{3} + 39014 \binom{n}{4} + 35364 \binom{n}{5} + 11788 \binom{n}{6}$	$2520$   $236$ $\frac{2947}{180}$   $11788$

7.12.93	(6,5,3,3,3,2,2)	
	$\frac{157}{10} n^6 + \frac{471}{10} n^5 + \frac{811}{12} n^4 + \frac{170}{3} n^3 + \frac{1723}{60} n^2 + \frac{247}{30} n + 1$ $1\binom{n}{0} + 224\binom{n}{1} + 3730\binom{n}{2} + 18316\binom{n}{3} + 37418\binom{n}{4} + 33912\binom{n}{5} + 11304\binom{n}{6}$	$1260 \quad \frac{157}{10} \quad 264$ $11304 \quad \frac{157}{10} \quad 11304$
7.12.94	(6,6,3,3,2,2,2)	
	$\frac{173}{10} n^6 + \frac{519}{10} n^5 + \frac{455}{6} n^4 + \frac{391}{6} n^3 + \frac{493}{15} n^2 + \frac{134}{15} n + 1$ $1\binom{n}{0} + 252\binom{n}{1} + 4148\binom{n}{2} + 20248\binom{n}{3} + 41264\binom{n}{4} + 37368\binom{n}{5} + 12456\binom{n}{6}$	$210 \quad \frac{173}{10} \quad 224$ $12456 \quad \frac{173}{10} \quad 12456$
7.13.1	(4,4,4,4,4,3,3)	
	$\frac{349}{30} n^6 + \frac{349}{10} n^5 + \frac{301}{6} n^4 + \frac{253}{6} n^3 + \frac{111}{5} n^2 + \frac{104}{15} n + 1$ $1\binom{n}{0} + 168\binom{n}{1} + 2768\binom{n}{2} + 13576\binom{n}{3} + 27728\binom{n}{4} + 25128\binom{n}{5} + 8376\binom{n}{6}$	$1260 \quad \frac{349}{30} \quad 672$ $8376 \quad \frac{349}{30} \quad 8376$
7.13.2	(4,4,4,4,4,3,3)	
	$\frac{211}{18} n^6 + \frac{211}{6} n^5 + \frac{913}{18} n^4 + \frac{257}{6} n^3 + \frac{203}{9} n^2 + 7n + 1$ $1\binom{n}{0} + 170\binom{n}{1} + 2794\binom{n}{2} + 13688\binom{n}{3} + 27944\binom{n}{4} + 25320\binom{n}{5} + 8440\binom{n}{6}$	$1260 \quad \frac{211}{18} \quad 665$ $8440 \quad \frac{211}{18} \quad 8440$
7.13.3	(4,4,4,4,4,3,3)	
	$\frac{521}{45} n^6 + \frac{521}{15} n^5 + \frac{451}{9} n^4 + \frac{127}{3} n^3 + \frac{1004}{45} n^2 + \frac{104}{15} n + 1$ $1\binom{n}{0} + 168\binom{n}{1} + 2760\binom{n}{2} + 13520\binom{n}{3} + 27600\binom{n}{4} + 25008\binom{n}{5} + 8336\binom{n}{6}$	$2520 \quad \frac{521}{45} \quad 689$ $8336 \quad \frac{521}{45} \quad 8336$
7.13.4	(4,4,4,4,4,4,2)	
	$\frac{437}{36} n^6 + \frac{437}{12} n^5 + \frac{473}{9} n^4 + \frac{533}{12} n^3 + \frac{839}{36} n^2 + \frac{43}{6} n + 1$ $1\binom{n}{0} + 176\binom{n}{1} + 2894\binom{n}{2} + 14176\binom{n}{3} + 28938\binom{n}{4} + 26220\binom{n}{5} + 8740\binom{n}{6}$	$1260 \quad \frac{437}{36} \quad 608$ $8740 \quad \frac{437}{36} \quad 8740$
7.13.5	(4,4,4,4,4,3,3)	
	$\frac{471}{40} n^6 + \frac{1413}{40} n^5 + \frac{1219}{24} n^4 + \frac{1025}{24} n^3 + \frac{673}{30} n^2 + \frac{209}{30} n + 1$ $1\binom{n}{0} + 170\binom{n}{1} + 2802\binom{n}{2} + 13742\binom{n}{3} + 28066\binom{n}{4} + 25434\binom{n}{5} + 8478\binom{n}{6}$	$2520 \quad \frac{471}{40} \quad 663$ $8478 \quad \frac{471}{40} \quad 8478$
7.13.6	(4,4,4,4,4,4,2)	
	$\frac{187}{15} n^6 + \frac{187}{5} n^5 + \frac{323}{6} n^4 + \frac{136}{3} n^3 + \frac{237}{10} n^2 + \frac{109}{15} n + 1$ $1\binom{n}{0} + 180\binom{n}{1} + 2968\binom{n}{2} + 14552\binom{n}{3} + 29716\binom{n}{4} + 26928\binom{n}{5} + 8976\binom{n}{6}$	$630 \quad \frac{187}{15} \quad 575$ $8976 \quad \frac{187}{15} \quad 8976$
7.13.7	(5,4,4,4,3,3,3)	
	$\frac{109}{9} n^6 + \frac{109}{3} n^5 + \frac{469}{9} n^4 + \frac{131}{3} n^3 + \frac{205}{9} n^2 + 7n + 1$ $1\binom{n}{0} + 174\binom{n}{1} + 2878\binom{n}{2} + 14128\binom{n}{3} + 28864\binom{n}{4} + 26160\binom{n}{5} + 8720\binom{n}{6}$	$2520 \quad \frac{109}{9} \quad 615$ $8720 \quad \frac{109}{9} \quad 8720$
7.13.8	(5,4,4,4,4,3,2)	
	$\frac{2267}{180} n^6 + \frac{2267}{60} n^5 + \frac{490}{9} n^4 + \frac{551}{12} n^3 + \frac{4313}{180} n^2 + \frac{73}{10} n + 1$ $1\binom{n}{0} + 182\binom{n}{1} + 3000\binom{n}{2} + 14704\binom{n}{3} + 30022\binom{n}{4} + 27204\binom{n}{5} + 9068\binom{n}{6}$	$2520 \quad \frac{2267}{180} \quad 545$ $9068 \quad \frac{2267}{180} \quad 9068$
7.13.9	(5,4,4,4,3,3,3)	
	$\frac{542}{45} n^6 + \frac{542}{15} n^5 + \frac{1873}{36} n^4 + \frac{263}{6} n^3 + \frac{4127}{180} n^2 + \frac{211}{30} n + 1$ $1\binom{n}{0} + 174\binom{n}{1} + 2868\binom{n}{2} + 14060\binom{n}{3} + 28710\binom{n}{4} + 26016\binom{n}{5} + 8672\binom{n}{6}$	$2520 \quad \frac{542}{45} \quad 620$ $8672 \quad \frac{542}{45} \quad 8672$

7.13.10	(5,4,4,4,4,3,2)			
	$\frac{233}{18} n^6 + \frac{233}{6} n^5 + \frac{502}{9} n^4 + \frac{281}{6} n^3 + \frac{437}{18} n^2 + \frac{22}{3} n + 1$ $1\binom{n}{0} + 186\binom{n}{1} + 3078\binom{n}{2} + 15104\binom{n}{3} + 30852\binom{n}{4} + 27960\binom{n}{5} + 9320\binom{n}{6}$	2520	528	$\frac{233}{18}$ 9320
7.13.11	(5,4,4,4,3,3,3)			
	$\frac{4393}{360} n^6 + \frac{4393}{120} n^5 + \frac{3791}{72} n^4 + \frac{1063}{24} n^3 + \frac{2083}{90} n^2 + \frac{71}{10} n + 1$ $1\binom{n}{0} + 176\binom{n}{1} + 2904\binom{n}{2} + 14242\binom{n}{3} + 29086\binom{n}{4} + 26358\binom{n}{5} + 8786\binom{n}{6}$	5040	608	$\frac{4393}{360}$ 8786
7.13.12	(5,5,4,4,4,2,2)			
	$\frac{83}{6} n^6 + \frac{83}{2} n^5 + 60 n^4 + \frac{305}{6} n^3 + \frac{157}{6} n^2 + \frac{23}{3} n + 1$ $1\binom{n}{0} + 200\binom{n}{1} + 3300\binom{n}{2} + 16160\binom{n}{3} + 32980\binom{n}{4} + 29880\binom{n}{5} + 9960\binom{n}{6}$	420	425	$\frac{83}{6}$ 9960
7.13.13	(5,4,4,4,4,3,2)			
	$\frac{779}{60} n^6 + \frac{779}{20} n^5 + \frac{225}{4} n^4 + \frac{571}{12} n^3 + \frac{743}{30} n^2 + \frac{112}{15} n + 1$ $1\binom{n}{0} + 188\binom{n}{1} + 3096\binom{n}{2} + 15164\binom{n}{3} + 30952\binom{n}{4} + 28044\binom{n}{5} + 9348\binom{n}{6}$	840	525	$\frac{779}{60}$ 9348
7.13.14	(5,5,4,3,3,3,3)			
	$\frac{64}{5} n^6 + \frac{192}{5} n^5 + \frac{331}{6} n^4 + \frac{139}{3} n^3 + \frac{721}{30} n^2 + \frac{109}{15} n + 1$ $1\binom{n}{0} + 184\binom{n}{1} + 3044\binom{n}{2} + 14936\binom{n}{3} + 30508\binom{n}{4} + 27648\binom{n}{5} + 9216\binom{n}{6}$	1260	552	$\frac{64}{5}$ 9216
7.13.15	(5,5,4,4,3,3,2)			
	$\frac{608}{45} n^6 + \frac{608}{15} n^5 + \frac{1049}{18} n^4 + 49 n^3 + \frac{2269}{90} n^2 + \frac{112}{15} n + 1$ $1\binom{n}{0} + 194\binom{n}{1} + 3214\binom{n}{2} + 15768\binom{n}{3} + 32204\binom{n}{4} + 29184\binom{n}{5} + 9728\binom{n}{6}$	2520	480	$\frac{608}{45}$ 9728
7.13.16	(5,5,4,4,3,3,2)			
	$\frac{41}{3} n^6 + 41 n^5 + \frac{178}{3} n^4 + \frac{151}{3} n^3 + 26 n^2 + \frac{23}{3} n + 1$ $1\binom{n}{0} + 198\binom{n}{1} + 3262\binom{n}{2} + 15968\binom{n}{3} + 32584\binom{n}{4} + 29520\binom{n}{5} + 9840\binom{n}{6}$	630	480	$\frac{41}{3}$ 9840
7.13.17	(5,4,4,4,3,3,3)			
	$\frac{1117}{90} n^6 + \frac{1117}{30} n^5 + \frac{484}{9} n^4 + \frac{91}{2} n^3 + \frac{2143}{90} n^2 + \frac{109}{15} n + 1$ $1\binom{n}{0} + 180\binom{n}{1} + 2960\binom{n}{2} + 14496\binom{n}{3} + 29588\binom{n}{4} + 26808\binom{n}{5} + 8936\binom{n}{6}$	1260	600	$\frac{1117}{90}$ 8936
7.13.18	(6,4,4,3,3,3,3)			
	$\frac{40}{3} n^6 + 40 n^5 + \frac{691}{12} n^4 + \frac{97}{2} n^3 + \frac{301}{12} n^2 + \frac{15}{2} n + 1$ $1\binom{n}{0} + 192\binom{n}{1} + 3174\binom{n}{2} + 15564\binom{n}{3} + 31782\binom{n}{4} + 28800\binom{n}{5} + 9600\binom{n}{6}$	630	512	$\frac{40}{3}$ 9600
7.13.19	(6,4,4,4,3,3,2)			
	$\frac{608}{45} n^6 + \frac{608}{15} n^5 + \frac{1049}{18} n^4 + 49 n^3 + \frac{2269}{90} n^2 + \frac{112}{15} n + 1$ $1\binom{n}{0} + 194\binom{n}{1} + 3214\binom{n}{2} + 15768\binom{n}{3} + 32204\binom{n}{4} + 29184\binom{n}{5} + 9728\binom{n}{6}$	2520	480	$\frac{608}{45}$ 9728
7.13.20	(4,4,4,4,4,3,3)			
	$\frac{517}{45} n^6 + \frac{517}{15} n^5 + \frac{901}{18} n^4 + \frac{128}{3} n^3 + \frac{2021}{90} n^2 + \frac{103}{15} n + 1$ $1\binom{n}{0} + 168\binom{n}{1} + 2748\binom{n}{2} + 13432\binom{n}{3} + 27396\binom{n}{4} + 24816\binom{n}{5} + 8272\binom{n}{6}$	630	704	$\frac{517}{45}$ 8272

7.13.21	(4,4,4,4,4,3,3)			
	$\frac{23}{2} n^6 + \frac{69}{2} n^5 + \frac{101}{2} n^4 + \frac{87}{2} n^3 + 23 n^2 + 7 n + 1$ $1 \binom{n}{0} + 170 \binom{n}{1} + 2762 \binom{n}{2} + 13464 \binom{n}{3} + 27432 \binom{n}{4} + 24840 \binom{n}{5} + 8280 \binom{n}{6}$	210 $\frac{23}{2}$	720 8280	
7.13.22	(5,4,4,4,3,3,3)			
	$\frac{2143}{180} n^6 + \frac{2143}{60} n^5 + \frac{925}{18} n^4 + \frac{173}{4} n^3 + \frac{4087}{180} n^2 + \frac{211}{30} n + 1$ $1 \binom{n}{0} + 172 \binom{n}{1} + 2834 \binom{n}{2} + 13896 \binom{n}{3} + 28378 \binom{n}{4} + 25716 \binom{n}{5} + 8572 \binom{n}{6}$	2520 $\frac{2143}{180}$	644 8572	
7.13.23	(5,4,4,4,4,3,2)			
	$\frac{249}{20} n^6 + \frac{747}{20} n^5 + \frac{323}{6} n^4 + \frac{545}{12} n^3 + \frac{1423}{60} n^2 + \frac{217}{30} n + 1$ $1 \binom{n}{0} + 180 \binom{n}{1} + 2966 \binom{n}{2} + 14536 \binom{n}{3} + 29678 \binom{n}{4} + 26892 \binom{n}{5} + 8964 \binom{n}{6}$	5040 $\frac{249}{20}$	569 8964	
7.13.24	(5,4,4,4,3,3,3)			
	$\frac{119}{10} n^6 + \frac{357}{10} n^5 + \frac{617}{12} n^4 + \frac{130}{3} n^3 + \frac{1361}{60} n^2 + \frac{209}{30} n + 1$ $1 \binom{n}{0} + 172 \binom{n}{1} + 2834 \binom{n}{2} + 13892 \binom{n}{3} + 28366 \binom{n}{4} + 25704 \binom{n}{5} + 8568 \binom{n}{6}$	5040 $\frac{119}{10}$	641 8568	
7.13.25	(5,4,4,4,3,3,3)			
	$\frac{237}{20} n^6 + \frac{711}{20} n^5 + \frac{154}{3} n^4 + \frac{521}{12} n^3 + \frac{1369}{60} n^2 + \frac{211}{30} n + 1$ $1 \binom{n}{0} + 172 \binom{n}{1} + 2826 \binom{n}{2} + 13840 \binom{n}{3} + 28250 \binom{n}{4} + 25596 \binom{n}{5} + 8532 \binom{n}{6}$	2520 $\frac{237}{20}$	644 8532	
7.13.26	(4,4,4,4,4,3,3)			
	$\frac{526}{45} n^6 + \frac{526}{15} n^5 + \frac{913}{18} n^4 + 43 n^3 + \frac{2033}{90} n^2 + \frac{104}{15} n + 1$ $1 \binom{n}{0} + 170 \binom{n}{1} + 2790 \binom{n}{2} + 13656 \binom{n}{3} + 27868 \binom{n}{4} + 25248 \binom{n}{5} + 8416 \binom{n}{6}$	1260 $\frac{526}{45}$	680 8416	
7.13.27	(5,4,4,4,4,3,2)			
	$\frac{2269}{180} n^6 + \frac{2269}{60} n^5 + \frac{1961}{36} n^4 + \frac{551}{12} n^3 + \frac{2153}{90} n^2 + \frac{109}{15} n + 1$ $1 \binom{n}{0} + 182 \binom{n}{1} + 3002 \binom{n}{2} + 14716 \binom{n}{3} + 30048 \binom{n}{4} + 27228 \binom{n}{5} + 9076 \binom{n}{6}$	2520 $\frac{2269}{180}$	560 9076	
7.13.28	(5,4,4,4,4,3,2)			
	$\frac{1127}{90} n^6 + \frac{1127}{30} n^5 + \frac{979}{18} n^4 + \frac{277}{6} n^3 + \frac{1084}{45} n^2 + \frac{109}{15} n + 1$ $1 \binom{n}{0} + 182 \binom{n}{1} + 2990 \binom{n}{2} + 14632 \binom{n}{3} + 29856 \binom{n}{4} + 27048 \binom{n}{5} + 9016 \binom{n}{6}$	1260 $\frac{1127}{90}$	560 9016	
7.13.29	(5,4,4,4,4,3,2)			
	$\frac{1147}{90} n^6 + \frac{1147}{30} n^5 + \frac{496}{9} n^4 + \frac{93}{2} n^3 + \frac{2173}{90} n^2 + \frac{109}{15} n + 1$ $1 \binom{n}{0} + 184 \binom{n}{1} + 3036 \binom{n}{2} + 14880 \binom{n}{3} + 30380 \binom{n}{4} + 27528 \binom{n}{5} + 9176 \binom{n}{6}$	2520 $\frac{1147}{90}$	552 9176	
7.13.30	(5,4,4,4,4,3,2)			
	$\frac{562}{45} n^6 + \frac{562}{15} n^5 + \frac{979}{18} n^4 + \frac{139}{3} n^3 + \frac{2171}{90} n^2 + \frac{36}{5} n + 1$ $1 \binom{n}{0} + 182 \binom{n}{1} + 2986 \binom{n}{2} + 14600 \binom{n}{3} + 29780 \binom{n}{4} + 26976 \binom{n}{5} + 8992 \binom{n}{6}$	1260 $\frac{562}{45}$	576 8992	
7.13.31	(5,4,4,4,3,3,3)			
	$\frac{2129}{180} n^6 + \frac{2129}{60} n^5 + \frac{1849}{36} n^4 + \frac{523}{12} n^3 + \frac{2053}{90} n^2 + \frac{104}{15} n + 1$ $1 \binom{n}{0} + 172 \binom{n}{1} + 2824 \binom{n}{2} + 13820 \binom{n}{3} + 28200 \binom{n}{4} + 25548 \binom{n}{5} + 8516 \binom{n}{6}$	2520 $\frac{2129}{180}$	656 8516	

7.13.32	(5,5,4,4,3,3,2)		
	$\frac{116}{9}n^6 + \frac{116}{3}n^5 + \frac{1003}{18}n^4 + 47n^3 + \frac{439}{18}n^2 + \frac{22}{3}n + 1$ $1\binom{n}{0} + 186\binom{n}{1} + 3070\binom{n}{2} + 15048\binom{n}{3} + 30724\binom{n}{4} + 27840\binom{n}{5} + 9280\binom{n}{6}$	1260	528
7.13.33	(5,5,4,4,3,3,2)		
	$\frac{4669}{360}n^6 + \frac{4669}{120}n^5 + \frac{4019}{72}n^4 + \frac{1123}{24}n^3 + \frac{2179}{90}n^2 + \frac{73}{10}n + 1$ $1\binom{n}{0} + 186\binom{n}{1} + 3082\binom{n}{2} + 15130\binom{n}{3} + 30910\binom{n}{4} + 28014\binom{n}{5} + 9338\binom{n}{6}$	5040	523
7.13.34	(5,4,4,4,3,3,3)		
	$\frac{541}{45}n^6 + \frac{541}{15}n^5 + \frac{1871}{36}n^4 + \frac{263}{6}n^3 + \frac{4141}{180}n^2 + \frac{71}{10}n + 1$ $1\binom{n}{0} + 174\binom{n}{1} + 2864\binom{n}{2} + 14036\binom{n}{3} + 28658\binom{n}{4} + 25968\binom{n}{5} + 8656\binom{n}{6}$	2520	638
7.13.35	(5,5,4,4,4,2,2)		
	$\frac{2477}{180}n^6 + \frac{2477}{60}n^5 + \frac{535}{9}n^4 + \frac{601}{12}n^3 + \frac{4643}{180}n^2 + \frac{229}{30}n + 1$ $1\binom{n}{0} + 198\binom{n}{1} + 3276\binom{n}{2} + 16064\binom{n}{3} + 32802\binom{n}{4} + 29724\binom{n}{5} + 9908\binom{n}{6}$	2520	456
7.13.36	(5,4,4,4,4,3,2)		
	$\frac{4553}{360}n^6 + \frac{4553}{120}n^5 + \frac{3925}{72}n^4 + \frac{1099}{24}n^3 + \frac{4291}{180}n^2 + \frac{109}{15}n + 1$ $1\binom{n}{0} + 182\binom{n}{1} + 3008\binom{n}{2} + 14758\binom{n}{3} + 30144\binom{n}{4} + 27318\binom{n}{5} + 9106\binom{n}{6}$	5040	558
7.13.37	(5,5,4,3,3,3,3)		
	$\frac{4439}{360}n^6 + \frac{4439}{120}n^5 + \frac{3835}{72}n^4 + \frac{359}{8}n^3 + \frac{4213}{180}n^2 + \frac{107}{15}n + 1$ $1\binom{n}{0} + 178\binom{n}{1} + 2936\binom{n}{2} + 14394\binom{n}{3} + 29392\binom{n}{4} + 26634\binom{n}{5} + 8878\binom{n}{6}$	5040	593
7.13.38	(5,5,4,4,3,3,2)		
	$\frac{941}{72}n^6 + \frac{941}{24}n^5 + \frac{4061}{72}n^4 + \frac{1139}{24}n^3 + \frac{883}{36}n^2 + \frac{22}{3}n + 1$ $1\binom{n}{0} + 188\binom{n}{1} + 3110\binom{n}{2} + 15254\binom{n}{3} + 31152\binom{n}{4} + 28230\binom{n}{5} + 9410\binom{n}{6}$	5040	516
7.13.39	(5,5,4,4,3,3,2)		
	$\frac{129}{10}n^6 + \frac{387}{10}n^5 + \frac{223}{4}n^4 + 47n^3 + \frac{487}{20}n^2 + \frac{73}{10}n + 1$ $1\binom{n}{0} + 186\binom{n}{1} + 3072\binom{n}{2} + 15060\binom{n}{3} + 30750\binom{n}{4} + 27864\binom{n}{5} + 9288\binom{n}{6}$	5040	521
7.13.40	(5,5,4,3,3,3,3)		
	$\frac{1487}{120}n^6 + \frac{1487}{40}n^5 + \frac{427}{8}n^4 + \frac{1075}{24}n^3 + \frac{697}{30}n^2 + \frac{211}{30}n + 1$ $1\binom{n}{0} + 178\binom{n}{1} + 2946\binom{n}{2} + 14458\binom{n}{3} + 29534\binom{n}{4} + 26766\binom{n}{5} + 8922\binom{n}{6}$	2520	585
7.13.41	(5,5,4,4,3,3,2)		
	$\frac{1169}{90}n^6 + \frac{1169}{30}n^5 + \frac{2027}{36}n^4 + \frac{143}{3}n^3 + \frac{4447}{180}n^2 + \frac{221}{30}n + 1$ $1\binom{n}{0} + 188\binom{n}{1} + 3098\binom{n}{2} + 15172\binom{n}{3} + 30966\binom{n}{4} + 28056\binom{n}{5} + 9352\binom{n}{6}$	2520	516
7.13.42	(5,4,4,4,3,3,3)		
	$\frac{4331}{360}n^6 + \frac{4331}{120}n^5 + \frac{3745}{72}n^4 + \frac{351}{8}n^3 + \frac{1033}{45}n^2 + \frac{211}{30}n + 1$ $1\binom{n}{0} + 174\binom{n}{1} + 2866\binom{n}{2} + 14046\binom{n}{3} + 28678\binom{n}{4} + 25986\binom{n}{5} + 8662\binom{n}{6}$	5040	633

7.13.43	(6,4,4,3,3,3,3)	
	$\frac{1139}{90} n^6 + \frac{1139}{30} n^5 + \frac{491}{9} n^4 + \frac{275}{6} n^3 + \frac{2141}{90} n^2 + \frac{36}{5} n + 1$ $1\binom{n}{0} + 182\binom{n}{1} + 3010\binom{n}{2} + 14768\binom{n}{3} + 30164\binom{n}{4} + 27336\binom{n}{5} + 9112\binom{n}{6}$	$2520 \quad 560$ $\frac{1139}{90} \quad 9112$
7.13.44	(6,4,4,4,3,3,2)	
	$\frac{2357}{180} n^6 + \frac{2357}{60} n^5 + \frac{508}{9} n^4 + \frac{569}{12} n^3 + \frac{4403}{180} n^2 + \frac{73}{10} n + 1$ $1\binom{n}{0} + 188\binom{n}{1} + 3114\binom{n}{2} + 15280\binom{n}{3} + 31210\binom{n}{4} + 28284\binom{n}{5} + 9428\binom{n}{6}$	$2520 \quad 513$ $\frac{2357}{180} \quad 9428$
7.13.45	(6,4,4,3,3,3,3)	
	$\frac{2251}{180} n^6 + \frac{2251}{60} n^5 + \frac{1943}{36} n^4 + \frac{545}{12} n^3 + \frac{2117}{90} n^2 + \frac{106}{15} n + 1$ $1\binom{n}{0} + 180\binom{n}{1} + 2976\binom{n}{2} + 14596\binom{n}{3} + 29808\binom{n}{4} + 27012\binom{n}{5} + 9004\binom{n}{6}$	$1260 \quad 576$ $\frac{2251}{180} \quad 9004$
7.13.46	(5,5,4,4,3,3,2)	
	$\frac{1147}{90} n^6 + \frac{1147}{30} n^5 + \frac{496}{9} n^4 + \frac{93}{2} n^3 + \frac{2173}{90} n^2 + \frac{109}{15} n + 1$ $1\binom{n}{0} + 184\binom{n}{1} + 3036\binom{n}{2} + 14880\binom{n}{3} + 30380\binom{n}{4} + 27528\binom{n}{5} + 9176\binom{n}{6}$	$2520 \quad 545$ $\frac{1147}{90} \quad 9176$
7.13.47	(5,5,4,4,3,3,2)	
	$\frac{767}{60} n^6 + \frac{767}{20} n^5 + \frac{331}{6} n^4 + \frac{557}{12} n^3 + \frac{481}{20} n^2 + \frac{217}{30} n + 1$ $1\binom{n}{0} + 184\binom{n}{1} + 3042\binom{n}{2} + 14920\binom{n}{3} + 30470\binom{n}{4} + 27612\binom{n}{5} + 9204\binom{n}{6}$	$1260 \quad 544$ $\frac{767}{60} \quad 9204$
7.13.48	(5,5,4,4,4,2,2)	
	$\frac{202}{15} n^6 + \frac{202}{5} n^5 + \frac{176}{3} n^4 + 50 n^3 + \frac{388}{15} n^2 + \frac{38}{5} n + 1$ $1\binom{n}{0} + 196\binom{n}{1} + 3220\binom{n}{2} + 15744\binom{n}{3} + 32112\binom{n}{4} + 29088\binom{n}{5} + 9696\binom{n}{6}$	$1260 \quad 480$ $\frac{202}{15} \quad 9696$
7.13.49	(5,4,4,4,4,3,2)	
	$\frac{2233}{180} n^6 + \frac{2233}{60} n^5 + \frac{1937}{36} n^4 + \frac{547}{12} n^3 + \frac{2141}{90} n^2 + \frac{36}{5} n + 1$ $1\binom{n}{0} + 180\binom{n}{1} + 2960\binom{n}{2} + 14492\binom{n}{3} + 29576\binom{n}{4} + 26796\binom{n}{5} + 8932\binom{n}{6}$	$2520 \quad 584$ $\frac{2233}{180} \quad 8932$
7.13.50	(5,5,4,4,4,2,2)	
	$\frac{803}{60} n^6 + \frac{803}{20} n^5 + \frac{697}{12} n^4 + \frac{197}{4} n^3 + \frac{383}{15} n^2 + \frac{38}{5} n + 1$ $1\binom{n}{0} + 194\binom{n}{1} + 3194\binom{n}{2} + 15636\binom{n}{3} + 31908\binom{n}{4} + 28908\binom{n}{5} + 9636\binom{n}{6}$	$2520 \quad 485$ $\frac{803}{60} \quad 9636$
7.13.51	(5,5,4,4,3,3,2)	
	$\frac{129}{10} n^6 + \frac{387}{10} n^5 + \frac{337}{6} n^4 + \frac{287}{6} n^3 + \frac{374}{15} n^2 + \frac{112}{15} n + 1$ $1\binom{n}{0} + 188\binom{n}{1} + 3084\binom{n}{2} + 15080\binom{n}{3} + 30760\binom{n}{4} + 27864\binom{n}{5} + 9288\binom{n}{6}$	$1260 \quad 540$ $\frac{129}{10} \quad 9288$
7.13.52	(5,4,4,4,4,3,2)	
	$\frac{249}{20} n^6 + \frac{747}{20} n^5 + \frac{217}{4} n^4 + \frac{185}{4} n^3 + \frac{243}{10} n^2 + \frac{37}{5} n + 1$ $1\binom{n}{0} + 182\binom{n}{1} + 2978\binom{n}{2} + 14556\binom{n}{3} + 29688\binom{n}{4} + 26892\binom{n}{5} + 8964\binom{n}{6}$	$2520 \quad 585$ $\frac{249}{20} \quad 8964$
7.13.53	(6,4,4,4,4,2,2)	
	$\frac{2479}{180} n^6 + \frac{2479}{60} n^5 + \frac{2141}{36} n^4 + \frac{601}{12} n^3 + \frac{1159}{45} n^2 + \frac{38}{5} n + 1$ $1\binom{n}{0} + 198\binom{n}{1} + 3278\binom{n}{2} + 16076\binom{n}{3} + 32828\binom{n}{4} + 29748\binom{n}{5} + 9916\binom{n}{6}$	$1260 \quad 455$ $\frac{2479}{180} \quad 9916$

7.13.54	(6,4,4,4,3,3,2)			
	$\frac{593}{45} n^6 + \frac{593}{15} n^5 + \frac{1025}{18} n^4 + 48 n^3 + \frac{2239}{90} n^2 + \frac{112}{15} n + 1$ $1 \binom{n}{0} + 190 \binom{n}{1} + 3138 \binom{n}{2} + 15384 \binom{n}{3} + 31412 \binom{n}{4} + 28464 \binom{n}{5} + 9488 \binom{n}{6}$	5040	512	$\frac{593}{45}$ 9488
7.13.55	(5,5,5,3,3,3,2)			
	$\frac{2377}{180} n^6 + \frac{2377}{60} n^5 + \frac{2051}{36} n^4 + \frac{575}{12} n^3 + \frac{1117}{45} n^2 + \frac{112}{15} n + 1$ $1 \binom{n}{0} + 190 \binom{n}{1} + 3142 \binom{n}{2} + 15412 \binom{n}{3} + 31476 \binom{n}{4} + 28524 \binom{n}{5} + 9508 \binom{n}{6}$	2520	506	$\frac{2377}{180}$ 9508
7.13.56	(5,5,5,4,3,2,2)			
	$\frac{69}{5} n^6 + \frac{207}{5} n^5 + \frac{119}{2} n^4 + 50 n^3 + \frac{257}{10} n^2 + \frac{38}{5} n + 1$ $1 \binom{n}{0} + 198 \binom{n}{1} + 3282 \binom{n}{2} + 16104 \binom{n}{3} + 32892 \binom{n}{4} + 29808 \binom{n}{5} + 9936 \binom{n}{6}$	2520	451	$\frac{69}{5}$ 9936
7.13.57	(5,5,4,4,3,3,2)			
	$\frac{4613}{360} n^6 + \frac{4613}{120} n^5 + \frac{4003}{72} n^4 + \frac{377}{8} n^3 + \frac{2213}{90} n^2 + \frac{223}{30} n + 1$ $1 \binom{n}{0} + 186 \binom{n}{1} + 3058 \binom{n}{2} + 14970 \binom{n}{3} + 30550 \binom{n}{4} + 27678 \binom{n}{5} + 9226 \binom{n}{6}$	5040	545	$\frac{4613}{360}$ 9226
7.13.58	(5,5,4,4,3,3,2)			
	$\frac{4633}{360} n^6 + \frac{4633}{120} n^5 + \frac{4007}{72} n^4 + \frac{1127}{24} n^3 + \frac{2203}{90} n^2 + \frac{223}{30} n + 1$ $1 \binom{n}{0} + 186 \binom{n}{1} + 3066 \binom{n}{2} + 15026 \binom{n}{3} + 30678 \binom{n}{4} + 27798 \binom{n}{5} + 9266 \binom{n}{6}$	5040	542	$\frac{4633}{360}$ 9266
7.13.59	(5,5,5,3,3,3,2)			
	$\frac{1183}{90} n^6 + \frac{1183}{30} n^5 + \frac{1025}{18} n^4 + \frac{289}{6} n^3 + \frac{1121}{45} n^2 + \frac{37}{5} n + 1$ $1 \binom{n}{0} + 190 \binom{n}{1} + 3134 \binom{n}{2} + 15352 \binom{n}{3} + 31336 \binom{n}{4} + 28392 \binom{n}{5} + 9464 \binom{n}{6}$	1260	504	$\frac{1183}{90}$ 9464
7.13.60	(5,5,5,4,3,2,2)			
	$\frac{1259}{90} n^6 + \frac{1259}{30} n^5 + \frac{2183}{36} n^4 + \frac{154}{3} n^3 + \frac{4747}{180} n^2 + \frac{77}{10} n + 1$ $1 \binom{n}{0} + 202 \binom{n}{1} + 3336 \binom{n}{2} + 16340 \binom{n}{3} + 33350 \binom{n}{4} + 30216 \binom{n}{5} + 10072 \binom{n}{6}$	2520	444	$\frac{1259}{90}$ 10072
7.13.61	(5,5,4,4,3,3,2)			
	$\frac{116}{9} n^6 + \frac{116}{3} n^5 + \frac{1003}{18} n^4 + 47 n^3 + \frac{439}{18} n^2 + \frac{22}{3} n + 1$ $1 \binom{n}{0} + 186 \binom{n}{1} + 3070 \binom{n}{2} + 15048 \binom{n}{3} + 30724 \binom{n}{4} + 27840 \binom{n}{5} + 9280 \binom{n}{6}$	2520	537	$\frac{116}{9}$ 9280
7.13.62	(5,5,4,3,3,3,3)			
	$\frac{1103}{90} n^6 + \frac{1103}{30} n^5 + \frac{1913}{36} n^4 + 45 n^3 + \frac{4249}{180} n^2 + \frac{217}{30} n + 1$ $1 \binom{n}{0} + 178 \binom{n}{1} + 2924 \binom{n}{2} + 14316 \binom{n}{3} + 29218 \binom{n}{4} + 26472 \binom{n}{5} + 8824 \binom{n}{6}$	2520	612	$\frac{1103}{90}$ 8824
7.13.63	(5,5,4,3,3,3,3)			
	$\frac{1099}{90} n^6 + \frac{1099}{30} n^5 + \frac{478}{9} n^4 + \frac{271}{6} n^3 + \frac{2131}{90} n^2 + \frac{36}{5} n + 1$ $1 \binom{n}{0} + 178 \binom{n}{1} + 2918 \binom{n}{2} + 14272 \binom{n}{3} + 29116 \binom{n}{4} + 26376 \binom{n}{5} + 8792 \binom{n}{6}$	1260	612	$\frac{1099}{90}$ 8792
7.13.64	(5,4,4,4,3,3,3)			
	$\frac{143}{12} n^6 + \frac{143}{4} n^5 + \frac{311}{6} n^4 + \frac{529}{12} n^3 + \frac{93}{4} n^2 + \frac{43}{6} n + 1$ $1 \binom{n}{0} + 174 \binom{n}{1} + 2848 \binom{n}{2} + 13928 \binom{n}{3} + 28414 \binom{n}{4} + 25740 \binom{n}{5} + 8580 \binom{n}{6}$	2520	657	$\frac{143}{12}$ 8580

7.13.65	(6,4,4,3,3,3,3)	
	$\frac{249}{20} n^6 + \frac{747}{20} n^5 + \frac{323}{6} n^4 + \frac{545}{12} n^3 + \frac{1423}{60} n^2 + \frac{217}{30} n + 1$ $1 \binom{n}{0} + 180 \binom{n}{1} + 2966 \binom{n}{2} + 14536 \binom{n}{3} + 29678 \binom{n}{4} + 26892 \binom{n}{5} + 8964 \binom{n}{6}$	$1260 \quad \frac{249}{20} \quad 585$ $8964$
7.13.66	(6,4,4,4,3,3,2)	
	$\frac{1171}{90} n^6 + \frac{1171}{30} n^5 + \frac{2029}{36} n^4 + \frac{143}{3} n^3 + \frac{4433}{180} n^2 + \frac{73}{10} n + 1$ $1 \binom{n}{0} + 188 \binom{n}{1} + 3102 \binom{n}{2} + 15196 \binom{n}{3} + 31018 \binom{n}{4} + 28104 \binom{n}{5} + 9368 \binom{n}{6}$	$1260 \quad \frac{1171}{90} \quad 528$ $9368$
7.13.67	(5,5,4,4,4,2,2)	
	$\frac{27}{2} n^6 + \frac{81}{2} n^5 + \frac{119}{2} n^4 + \frac{103}{2} n^3 + 27 n^2 + 8 n + 1$ $1 \binom{n}{0} + 200 \binom{n}{1} + 3248 \binom{n}{2} + 15816 \binom{n}{3} + 32208 \binom{n}{4} + 29160 \binom{n}{5} + 9720 \binom{n}{6}$	$210 \quad \frac{27}{2} \quad 500$ $9720$
7.13.68	(6,5,4,4,3,2,2)	
	$\frac{638}{45} n^6 + \frac{638}{15} n^5 + \frac{2221}{36} n^4 + \frac{105}{2} n^3 + \frac{4883}{180} n^2 + \frac{239}{30} n + 1$ $1 \binom{n}{0} + 206 \binom{n}{1} + 3388 \binom{n}{2} + 16572 \binom{n}{3} + 33806 \binom{n}{4} + 30624 \binom{n}{5} + 10208 \binom{n}{6}$	$1260 \quad \frac{638}{45} \quad 440$ $10208$
7.13.69	(5,5,4,3,3,3,3)	
	$\frac{377}{30} n^6 + \frac{377}{10} n^5 + \frac{329}{6} n^4 + \frac{281}{6} n^3 + \frac{123}{5} n^2 + \frac{112}{15} n + 1$ $1 \binom{n}{0} + 184 \binom{n}{1} + 3008 \binom{n}{2} + 14696 \binom{n}{3} + 29968 \binom{n}{4} + 27144 \binom{n}{5} + 9048 \binom{n}{6}$	$630 \quad \frac{377}{30} \quad 600$ $9048$
7.13.70	(6,5,4,3,3,3,2)	
	$\frac{206}{15} n^6 + \frac{206}{5} n^5 + \frac{713}{12} n^4 + \frac{301}{6} n^3 + \frac{517}{20} n^2 + \frac{229}{30} n + 1$ $1 \binom{n}{0} + 198 \binom{n}{1} + 3272 \binom{n}{2} + 16036 \binom{n}{3} + 32738 \binom{n}{4} + 29664 \binom{n}{5} + 9888 \binom{n}{6}$	$2520 \quad \frac{206}{15} \quad 472$ $9888$
7.13.71	(6,5,4,3,3,3,2)	
	$\frac{619}{45} n^6 + \frac{619}{15} n^5 + \frac{2141}{36} n^4 + \frac{301}{6} n^3 + \frac{4639}{180} n^2 + \frac{227}{30} n + 1$ $1 \binom{n}{0} + 198 \binom{n}{1} + 3276 \binom{n}{2} + 16060 \binom{n}{3} + 32790 \binom{n}{4} + 29712 \binom{n}{5} + 9904 \binom{n}{6}$	$2520 \quad \frac{619}{45} \quad 465$ $9904$
7.13.72	(6,5,3,3,3,3,3)	
	$\frac{197}{15} n^6 + \frac{197}{5} n^5 + \frac{683}{12} n^4 + \frac{289}{6} n^3 + \frac{499}{20} n^2 + \frac{223}{30} n + 1$ $1 \binom{n}{0} + 190 \binom{n}{1} + 3132 \binom{n}{2} + 15340 \binom{n}{3} + 31310 \binom{n}{4} + 28368 \binom{n}{5} + 9456 \binom{n}{6}$	$1260 \quad \frac{197}{15} \quad 528$ $9456$
7.13.73	(5,5,4,4,3,3,2)	
	$\frac{2311}{180} n^6 + \frac{2311}{60} n^5 + \frac{1009}{18} n^4 + \frac{575}{12} n^3 + \frac{4519}{180} n^2 + \frac{227}{30} n + 1$ $1 \binom{n}{0} + 188 \binom{n}{1} + 3074 \binom{n}{2} + 15016 \binom{n}{3} + 30618 \binom{n}{4} + 27732 \binom{n}{5} + 9244 \binom{n}{6}$	$1260 \quad \frac{2311}{180} \quad 560$ $9244$
7.13.74	(6,5,4,4,3,2,2)	
	$\frac{505}{36} n^6 + \frac{505}{12} n^5 + \frac{2185}{36} n^4 + \frac{205}{4} n^3 + \frac{473}{18} n^2 + \frac{23}{3} n + 1$ $1 \binom{n}{0} + 202 \binom{n}{1} + 3342 \binom{n}{2} + 16380 \binom{n}{3} + 33440 \binom{n}{4} + 30300 \binom{n}{5} + 10100 \binom{n}{6}$	$5040 \quad \frac{505}{36} \quad 441$ $10100$
7.13.75	(6,5,4,3,3,3,2)	
	$\frac{1609}{120} n^6 + \frac{1609}{40} n^5 + \frac{465}{8} n^4 + \frac{1181}{24} n^3 + \frac{382}{15} n^2 + \frac{227}{30} n + 1$ $1 \binom{n}{0} + 194 \binom{n}{1} + 3198 \binom{n}{2} + 15662 \binom{n}{3} + 31966 \binom{n}{4} + 28962 \binom{n}{5} + 9654 \binom{n}{6}$	$5040 \quad \frac{1609}{120} \quad 497$ $9654$

7.13.76	(6,6,3,3,3,3,2)	
	$\frac{43}{3} n^6 + 43 n^5 + \frac{377}{6} n^4 + 54 n^3 + \frac{167}{6} n^2 + 8 n + 1$ $1 \binom{n}{0} + 210 \binom{n}{1} + 3438 \binom{n}{2} + 16776 \binom{n}{3} + 34188 \binom{n}{4} + 30960 \binom{n}{5} + 10320 \binom{n}{6}$	315   448 $\frac{43}{3}$   10320
7.13.77	(5,5,5,3,3,3,2)	
	$\frac{197}{15} n^6 + \frac{197}{5} n^5 + \frac{173}{3} n^4 + \frac{149}{3} n^3 + \frac{131}{5} n^2 + \frac{119}{15} n + 1$ $1 \binom{n}{0} + 194 \binom{n}{1} + 3154 \binom{n}{2} + 15376 \binom{n}{3} + 31328 \binom{n}{4} + 28368 \binom{n}{5} + 9456 \binom{n}{6}$	420   540 $\frac{197}{15}$   9456
7.13.78	(5,5,4,3,3,3,3)	
	$\frac{61}{5} n^6 + \frac{183}{5} n^5 + \frac{323}{6} n^4 + \frac{140}{3} n^3 + \frac{749}{30} n^2 + \frac{116}{15} n + 1$ $1 \binom{n}{0} + 182 \binom{n}{1} + 2938 \binom{n}{2} + 14296 \binom{n}{3} + 29108 \binom{n}{4} + 26352 \binom{n}{5} + 8784 \binom{n}{6}$	105   648 $\frac{61}{5}$   8784
7.13.79	(6,5,5,3,3,2,2)	
	$\frac{1289}{90} n^6 + \frac{1289}{30} n^5 + \frac{2243}{36} n^4 + 53 n^3 + \frac{4927}{180} n^2 + \frac{241}{30} n + 1$ $1 \binom{n}{0} + 208 \binom{n}{1} + 3422 \binom{n}{2} + 16740 \binom{n}{3} + 34150 \binom{n}{4} + 30936 \binom{n}{5} + 10312 \binom{n}{6}$	1260   429 $\frac{1289}{90}$   10312
7.13.80	(6,5,4,3,3,3,2)	
	$\frac{401}{30} n^6 + \frac{401}{10} n^5 + \frac{701}{12} n^4 + 50 n^3 + \frac{1573}{60} n^2 + \frac{79}{10} n + 1$ $1 \binom{n}{0} + 196 \binom{n}{1} + 3202 \binom{n}{2} + 15636 \binom{n}{3} + 31878 \binom{n}{4} + 28872 \binom{n}{5} + 9624 \binom{n}{6}$	840   513 $\frac{401}{30}$   9624
7.13.81	(6,6,4,3,3,2,2)	
	$\frac{661}{45} n^6 + \frac{661}{15} n^5 + \frac{581}{9} n^4 + \frac{167}{3} n^3 + \frac{1294}{45} n^2 + \frac{124}{15} n + 1$ $1 \binom{n}{0} + 216 \binom{n}{1} + 3528 \binom{n}{2} + 17200 \binom{n}{3} + 35040 \binom{n}{4} + 31728 \binom{n}{5} + 10576 \binom{n}{6}$	630   420 $\frac{661}{45}$   10576
7.14.1	(4,4,4,4,4,4)	
	$\frac{623}{60} n^6 + \frac{623}{20} n^5 + \frac{91}{2} n^4 + \frac{469}{12} n^3 + \frac{1267}{60} n^2 + \frac{203}{30} n + 1$ $1 \binom{n}{0} + 154 \binom{n}{1} + 2492 \binom{n}{2} + 12152 \binom{n}{3} + 24766 \binom{n}{4} + 22428 \binom{n}{5} + 7476 \binom{n}{6}$	360   1183 $\frac{623}{60}$   7476
7.14.2	(5,4,4,4,4,4,3)	
	$\frac{959}{90} n^6 + \frac{959}{30} n^5 + \frac{841}{18} n^4 + \frac{241}{6} n^3 + \frac{973}{45} n^2 + \frac{103}{15} n + 1$ $1 \binom{n}{0} + 158 \binom{n}{1} + 2558 \binom{n}{2} + 12472 \binom{n}{3} + 25416 \binom{n}{4} + 23016 \binom{n}{5} + 7672 \binom{n}{6}$	2520   1104 $\frac{959}{90}$   7672
7.14.3	(5,5,4,4,4,3,3)	
	$\frac{1967}{180} n^6 + \frac{1967}{60} n^5 + \frac{863}{18} n^4 + \frac{165}{4} n^3 + \frac{3983}{180} n^2 + \frac{209}{30} n + 1$ $1 \binom{n}{0} + 162 \binom{n}{1} + 2624 \binom{n}{2} + 12792 \binom{n}{3} + 26066 \binom{n}{4} + 23604 \binom{n}{5} + 7868 \binom{n}{6}$	2520   1032 $\frac{1967}{180}$   7868
7.14.4	(5,5,4,4,4,3,3)	
	$\frac{494}{45} n^6 + \frac{494}{15} n^5 + \frac{1729}{36} n^4 + \frac{247}{6} n^3 + \frac{3959}{180} n^2 + \frac{69}{10} n + 1$ $1 \binom{n}{0} + 162 \binom{n}{1} + 2632 \binom{n}{2} + 12844 \binom{n}{3} + 26182 \binom{n}{4} + 23712 \binom{n}{5} + 7904 \binom{n}{6}$	2520   1027 $\frac{494}{45}$   7904
7.14.5	(5,5,4,4,4,4,2)	
	$\frac{229}{20} n^6 + \frac{687}{20} n^5 + \frac{151}{3} n^4 + \frac{521}{12} n^3 + \frac{1393}{60} n^2 + \frac{217}{30} n + 1$ $1 \binom{n}{0} + 170 \binom{n}{1} + 2752 \binom{n}{2} + 13408 \binom{n}{3} + 27314 \binom{n}{4} + 24732 \binom{n}{5} + 8244 \binom{n}{6}$	1260   912 $\frac{229}{20}$   8244

7.14.6	(5,4,4,4,4,4,3)	
	$\frac{641}{60} n^6 + \frac{641}{20} n^5 + \frac{187}{4} n^4 + \frac{481}{12} n^3 + \frac{647}{30} n^2 + \frac{103}{15} n + 1$ $1\binom{n}{0} + 158\binom{n}{1} + 2562\binom{n}{2} + 12500\binom{n}{3} + 25480\binom{n}{4} + 23076\binom{n}{5} + 7692\binom{n}{6}$	$2520 \quad \frac{641}{60} \quad 1102$ $7692$
7.14.7	(5,5,5,4,3,3,3)	
	$\frac{2053}{180} n^6 + \frac{2053}{60} n^5 + \frac{449}{9} n^4 + \frac{171}{4} n^3 + \frac{4087}{180} n^2 + \frac{211}{30} n + 1$ $1\binom{n}{0} + 168\binom{n}{1} + 2734\binom{n}{2} + 13344\binom{n}{3} + 27202\binom{n}{4} + 24636\binom{n}{5} + 8212\binom{n}{6}$	$2520 \quad \frac{2053}{180} \quad 943$ $8212$
7.14.8	(5,5,4,4,4,3,3)	
	$\frac{497}{45} n^6 + \frac{497}{15} n^5 + \frac{1747}{36} n^4 + \frac{251}{6} n^3 + \frac{4037}{180} n^2 + \frac{211}{30} n + 1$ $1\binom{n}{0} + 164\binom{n}{1} + 2654\binom{n}{2} + 12932\binom{n}{3} + 26346\binom{n}{4} + 23856\binom{n}{5} + 7952\binom{n}{6}$	$2520 \quad \frac{497}{45} \quad 1020$ $7952$
7.14.9	(5,5,4,4,4,3,3)	
	$\frac{799}{72} n^6 + \frac{799}{24} n^5 + \frac{3499}{72} n^4 + \frac{1001}{24} n^3 + \frac{803}{36} n^2 + 7n + 1$ $1\binom{n}{0} + 164\binom{n}{1} + 2662\binom{n}{2} + 12986\binom{n}{3} + 26468\binom{n}{4} + 23970\binom{n}{5} + 7990\binom{n}{6}$	$5040 \quad \frac{799}{72} \quad 1015$ $7990$
7.14.10	(5,5,5,4,4,3,2)	
	$\frac{71}{6} n^6 + \frac{71}{2} n^5 + \frac{313}{6} n^4 + \frac{271}{6} n^3 + 24n^2 + \frac{22}{3} n + 1$ $1\binom{n}{0} + 176\binom{n}{1} + 2848\binom{n}{2} + 13864\binom{n}{3} + 28232\binom{n}{4} + 25560\binom{n}{5} + 8520\binom{n}{6}$	$1260 \quad \frac{71}{6} \quad 840$ $8520$
7.14.11	(5,5,5,4,4,3,2)	
	$\frac{217}{18} n^6 + \frac{217}{6} n^5 + \frac{476}{9} n^4 + \frac{91}{2} n^3 + \frac{433}{18} n^2 + \frac{22}{3} n + 1$ $1\binom{n}{0} + 178\binom{n}{1} + 2894\binom{n}{2} + 14112\binom{n}{3} + 28756\binom{n}{4} + 26040\binom{n}{5} + 8680\binom{n}{6}$	$2520 \quad \frac{217}{18} \quad 828$ $8680$
7.14.12	(5,5,4,4,4,4,2)	
	$\frac{349}{30} n^6 + \frac{349}{10} n^5 + 51n^4 + \frac{263}{6} n^3 + \frac{701}{30} n^2 + \frac{109}{15} n + 1$ $1\binom{n}{0} + 172\binom{n}{1} + 2792\binom{n}{2} + 13616\binom{n}{3} + 27748\binom{n}{4} + 25128\binom{n}{5} + 8376\binom{n}{6}$	$2520 \quad \frac{349}{30} \quad 895$ $8376$
7.14.13	(5,5,4,4,4,3,3)	
	$\frac{199}{18} n^6 + \frac{199}{6} n^5 + \frac{437}{9} n^4 + \frac{251}{6} n^3 + \frac{403}{18} n^2 + 7n + 1$ $1\binom{n}{0} + 164\binom{n}{1} + 2656\binom{n}{2} + 12944\binom{n}{3} + 26372\binom{n}{4} + 23880\binom{n}{5} + 7960\binom{n}{6}$	$1260 \quad \frac{199}{18} \quad 1020$ $7960$
7.14.14	(5,4,4,4,4,4,3)	
	$\frac{1937}{180} n^6 + \frac{1937}{60} n^5 + \frac{851}{18} n^4 + \frac{163}{4} n^3 + \frac{3953}{180} n^2 + \frac{209}{30} n + 1$ $1\binom{n}{0} + 160\binom{n}{1} + 2586\binom{n}{2} + 12600\binom{n}{3} + 25670\binom{n}{4} + 23244\binom{n}{5} + 7748\binom{n}{6}$	$2520 \quad \frac{1937}{180} \quad 1095$ $7748$
7.14.15	(6,4,4,4,4,3,3)	
	$\frac{2023}{180} n^6 + \frac{2023}{60} n^5 + \frac{443}{9} n^4 + \frac{169}{4} n^3 + \frac{4057}{180} n^2 + \frac{211}{30} n + 1$ $1\binom{n}{0} + 166\binom{n}{1} + 2696\binom{n}{2} + 13152\binom{n}{3} + 26806\binom{n}{4} + 24276\binom{n}{5} + 8092\binom{n}{6}$	$1260 \quad \frac{2023}{180} \quad 975$ $8092$
7.14.16	(6,4,4,4,4,3,3)	
	$\frac{683}{60} n^6 + \frac{683}{20} n^5 + \frac{299}{6} n^4 + \frac{171}{4} n^3 + \frac{1367}{60} n^2 + \frac{71}{10} n + 1$ $1\binom{n}{0} + 168\binom{n}{1} + 2730\binom{n}{2} + 13320\binom{n}{3} + 27150\binom{n}{4} + 24588\binom{n}{5} + 8196\binom{n}{6}$	$1260 \quad \frac{683}{60} \quad 960$ $8196$

7.14.17	(5,5,4,4,4,3,3)	
	$\frac{34}{3} n^6 + 34 n^5 + \frac{301}{6} n^4 + \frac{131}{3} n^3 + \frac{47}{2} n^2 + \frac{22}{3} n + 1$ $1\binom{n}{0} + 170\binom{n}{1} + 2734\binom{n}{2} + 13288\binom{n}{3} + 27044\binom{n}{4} + 24480\binom{n}{5} + 8160\binom{n}{6}$	$210 \quad \frac{210}{\frac{34}{3}} = 1000$ $8160$
7.14.18	(6,5,4,4,4,3,2)	
	$\frac{149}{12} n^6 + \frac{149}{4} n^5 + \frac{164}{3} n^4 + \frac{189}{4} n^3 + \frac{299}{12} n^2 + \frac{15}{2} n + 1$ $1\binom{n}{0} + 184\binom{n}{1} + 2986\binom{n}{2} + 14544\binom{n}{3} + 29622\binom{n}{4} + 26820\binom{n}{5} + 8940\binom{n}{6}$	$840 \quad \frac{840}{\frac{149}{12}} = 775$ $8940$
7.14.19	(6,5,4,4,3,3,3)	
	$\frac{119}{10} n^6 + \frac{357}{10} n^5 + \frac{209}{4} n^4 + 45 n^3 + \frac{477}{20} n^2 + \frac{73}{10} n + 1$ $1\binom{n}{0} + 176\binom{n}{1} + 2858\binom{n}{2} + 13932\binom{n}{3} + 28386\binom{n}{4} + 25704\binom{n}{5} + 8568\binom{n}{6}$	$1260 \quad \frac{1260}{\frac{119}{10}} = 880$ $8568$
7.14.20	(4,4,4,4,4,4,4)	
	$\frac{52}{5} n^6 + \frac{156}{5} n^5 + 46 n^4 + 40 n^3 + \frac{108}{5} n^2 + \frac{34}{5} n + 1$ $1\binom{n}{0} + 156\binom{n}{1} + 2508\binom{n}{2} + 12192\binom{n}{3} + 24816\binom{n}{4} + 22464\binom{n}{5} + 7488\binom{n}{6}$	$105 \quad \frac{105}{\frac{52}{5}} = 1200$ $7488$
7.14.21	(5,4,4,4,4,4,3)	
	$\frac{158}{15} n^6 + \frac{158}{5} n^5 + \frac{140}{3} n^4 + \frac{122}{3} n^3 + \frac{109}{5} n^2 + \frac{101}{15} n + 1$ $1\binom{n}{0} + 158\binom{n}{1} + 2542\binom{n}{2} + 12352\binom{n}{3} + 25136\binom{n}{4} + 22752\binom{n}{5} + 7584\binom{n}{6}$	$420 \quad \frac{420}{\frac{158}{15}} = 1152$ $7584$
7.14.22	(5,5,5,5,3,3,2)	
	$\frac{2177}{180} n^6 + \frac{2177}{60} n^5 + \frac{953}{18} n^4 + \frac{545}{12} n^3 + \frac{4313}{180} n^2 + \frac{73}{10} n + 1$ $1\binom{n}{0} + 178\binom{n}{1} + 2900\binom{n}{2} + 14152\binom{n}{3} + 28846\binom{n}{4} + 26124\binom{n}{5} + 8708\binom{n}{6}$	$1260 \quad \frac{1260}{\frac{2177}{180}} = 816$ $8708$
7.14.23	(5,5,5,4,3,3,3)	
	$\frac{2021}{180} n^6 + \frac{2021}{60} n^5 + \frac{1771}{36} n^4 + \frac{169}{4} n^3 + \frac{1016}{45} n^2 + \frac{106}{15} n + 1$ $1\binom{n}{0} + 166\binom{n}{1} + 2694\binom{n}{2} + 13140\binom{n}{3} + 26780\binom{n}{4} + 24252\binom{n}{5} + 8084\binom{n}{6}$	$2520 \quad \frac{2520}{\frac{2021}{180}} = 986$ $8084$
7.14.24	(5,5,4,4,4,3,3)	
	$\frac{1967}{180} n^6 + \frac{1967}{60} n^5 + \frac{863}{18} n^4 + \frac{165}{4} n^3 + \frac{3983}{180} n^2 + \frac{209}{30} n + 1$ $1\binom{n}{0} + 162\binom{n}{1} + 2624\binom{n}{2} + 12792\binom{n}{3} + 26066\binom{n}{4} + 23604\binom{n}{5} + 7868\binom{n}{6}$	$2520 \quad \frac{2520}{\frac{1967}{180}} = 1053$ $7868$
7.14.25	(5,5,5,4,3,3,3)	
	$\frac{403}{36} n^6 + \frac{403}{12} n^5 + \frac{1771}{36} n^4 + \frac{509}{12} n^3 + \frac{407}{18} n^2 + 7 n + 1$ $1\binom{n}{0} + 166\binom{n}{1} + 2690\binom{n}{2} + 13108\binom{n}{3} + 26704\binom{n}{4} + 24180\binom{n}{5} + 8060\binom{n}{6}$	$2520 \quad \frac{2520}{\frac{403}{36}} = 984$ $8060$
7.14.26	(5,5,4,4,4,3,3)	
	$\frac{109}{10} n^6 + \frac{327}{10} n^5 + \frac{575}{12} n^4 + \frac{124}{3} n^3 + \frac{1331}{60} n^2 + \frac{209}{30} n + 1$ $1\binom{n}{0} + 162\binom{n}{1} + 2620\binom{n}{2} + 12764\binom{n}{3} + 26002\binom{n}{4} + 23544\binom{n}{5} + 7848\binom{n}{6}$	$5040 \quad \frac{5040}{\frac{109}{10}} = 1056$ $7848$
7.14.27	(6,4,4,4,4,3,3)	
	$\frac{1997}{180} n^6 + \frac{1997}{60} n^5 + \frac{875}{18} n^4 + \frac{167}{4} n^3 + \frac{4013}{180} n^2 + \frac{209}{30} n + 1$ $1\binom{n}{0} + 164\binom{n}{1} + 2662\binom{n}{2} + 12984\binom{n}{3} + 26462\binom{n}{4} + 23964\binom{n}{5} + 7988\binom{n}{6}$	$2520 \quad \frac{2520}{\frac{1997}{180}} = 1008$ $7988$

7.14.28	(5,5,5,5,4,2,2)	
	$\frac{115}{9} n^6 + \frac{115}{3} n^5 + \frac{508}{9} n^4 + 49 n^3 + \frac{232}{9} n^2 + \frac{23}{3} n + 1$ $1 \binom{n}{0} + 190 \binom{n}{1} + 3078 \binom{n}{2} + 14976 \binom{n}{3} + 30488 \binom{n}{4} + 27600 \binom{n}{5} + 9200 \binom{n}{6}$	$630 \quad \frac{115}{9}$ $720 \quad 9200$
7.14.29	(5,5,5,4,4,3,2)	
	$\frac{2119}{180} n^6 + \frac{2119}{60} n^5 + \frac{1859}{36} n^4 + \frac{533}{12} n^3 + \frac{2123}{90} n^2 + \frac{109}{15} n + 1$ $1 \binom{n}{0} + 174 \binom{n}{1} + 2826 \binom{n}{2} + 13780 \binom{n}{3} + 28080 \binom{n}{4} + 25428 \binom{n}{5} + 8476 \binom{n}{6}$	$5040 \quad \frac{2119}{180}$ $871 \quad 8476$
7.14.30	(5,5,5,4,4,3,2)	
	$\frac{703}{60} n^6 + \frac{703}{20} n^5 + \frac{619}{12} n^4 + \frac{535}{12} n^3 + \frac{237}{10} n^2 + \frac{109}{15} n + 1$ $1 \binom{n}{0} + 174 \binom{n}{1} + 2818 \binom{n}{2} + 13724 \binom{n}{3} + 27952 \binom{n}{4} + 25308 \binom{n}{5} + 8436 \binom{n}{6}$	$2520 \quad \frac{703}{60}$ $876 \quad 8436$
7.14.31	(5,5,4,4,4,4,2)	
	$\frac{517}{45} n^6 + \frac{517}{15} n^5 + \frac{907}{18} n^4 + \frac{130}{3} n^3 + \frac{2081}{90} n^2 + \frac{36}{5} n + 1$ $1 \binom{n}{0} + 170 \binom{n}{1} + 2758 \binom{n}{2} + 13448 \binom{n}{3} + 27404 \binom{n}{4} + 24816 \binom{n}{5} + 8272 \binom{n}{6}$	$1260 \quad \frac{517}{45}$ $928 \quad 8272$
7.14.32	(5,5,5,4,4,3,2)	
	$\frac{1067}{90} n^6 + \frac{1067}{30} n^5 + \frac{470}{9} n^4 + \frac{271}{6} n^3 + \frac{2153}{90} n^2 + \frac{109}{15} n + 1$ $1 \binom{n}{0} + 176 \binom{n}{1} + 2852 \binom{n}{2} + 13888 \binom{n}{3} + 28284 \binom{n}{4} + 25608 \binom{n}{5} + 8536 \binom{n}{6}$	$1260 \quad \frac{1067}{90}$ $864 \quad 8536$
7.14.33	(5,5,4,4,4,4,2)	
	$\frac{2053}{180} n^6 + \frac{2053}{60} n^5 + \frac{1811}{36} n^4 + \frac{523}{12} n^3 + \frac{1048}{45} n^2 + \frac{36}{5} n + 1$ $1 \binom{n}{0} + 170 \binom{n}{1} + 2746 \binom{n}{2} + 13364 \binom{n}{3} + 27212 \binom{n}{4} + 24636 \binom{n}{5} + 8212 \binom{n}{6}$	$2520 \quad \frac{2053}{180}$ $936 \quad 8212$
7.14.34	(5,5,5,4,4,3,2)	
	$\frac{59}{5} n^6 + \frac{177}{5} n^5 + \frac{313}{6} n^4 + \frac{136}{3} n^3 + \frac{721}{30} n^2 + \frac{109}{15} n + 1$ $1 \binom{n}{0} + 176 \binom{n}{1} + 2844 \binom{n}{2} + 13832 \binom{n}{3} + 28156 \binom{n}{4} + 25488 \binom{n}{5} + 8496 \binom{n}{6}$	$420 \quad \frac{59}{5}$ $864 \quad 8496$
7.14.35	(5,5,4,4,4,3,3)	
	$\frac{164}{15} n^6 + \frac{164}{5} n^5 + 48 n^4 + \frac{124}{3} n^3 + \frac{331}{15} n^2 + \frac{103}{15} n + 1$ $1 \binom{n}{0} + 162 \binom{n}{1} + 2626 \binom{n}{2} + 12800 \binom{n}{3} + 26080 \binom{n}{4} + 23616 \binom{n}{5} + 7872 \binom{n}{6}$	$2520 \quad \frac{164}{15}$ $1048 \quad 7872$
7.14.36	(5,5,4,4,4,3,3)	
	$\frac{977}{90} n^6 + \frac{977}{30} n^5 + \frac{431}{9} n^4 + \frac{83}{2} n^3 + \frac{2003}{90} n^2 + \frac{104}{15} n + 1$ $1 \binom{n}{0} + 162 \binom{n}{1} + 2614 \binom{n}{2} + 12720 \binom{n}{3} + 25900 \binom{n}{4} + 23448 \binom{n}{5} + 7816 \binom{n}{6}$	$1260 \quad \frac{977}{90}$ $1056 \quad 7816$
7.14.37	(5,4,4,4,4,4,3)	
	$\frac{191}{18} n^6 + \frac{191}{6} n^5 + \frac{1681}{36} n^4 + \frac{121}{3} n^3 + \frac{781}{36} n^2 + \frac{41}{6} n + 1$ $1 \binom{n}{0} + 158 \binom{n}{1} + 2552 \binom{n}{2} + 12428 \binom{n}{3} + 25314 \binom{n}{4} + 22920 \binom{n}{5} + 7640 \binom{n}{6}$	$2520 \quad \frac{191}{18}$ $1128 \quad 7640$
7.14.38	(6,4,4,4,4,4,2)	
	$\frac{529}{45} n^6 + \frac{529}{15} n^5 + \frac{1859}{36} n^4 + \frac{89}{2} n^3 + \frac{4249}{180} n^2 + \frac{217}{30} n + 1$ $1 \binom{n}{0} + 174 \binom{n}{1} + 2824 \binom{n}{2} + 13764 \binom{n}{3} + 28042 \binom{n}{4} + 25392 \binom{n}{5} + 8464 \binom{n}{6}$	$1260 \quad \frac{529}{45}$ $880 \quad 8464$

7.14.39	(6,4,4,4,4,3,3)		
	$\frac{199}{18} n^6 + \frac{199}{6} n^5 + \frac{1751}{36} n^4 + 42 n^3 + \frac{803}{36} n^2 + \frac{41}{6} n + 1$ $1 \binom{n}{0} + 164 \binom{n}{1} + 2658 \binom{n}{2} + 12948 \binom{n}{3} + 26374 \binom{n}{4} + 23880 \binom{n}{5} + 7960 \binom{n}{6}$	630	1024
7.14.40	(5,5,4,4,4,3,3)		
	$\frac{331}{30} n^6 + \frac{331}{10} n^5 + \frac{97}{2} n^4 + \frac{251}{6} n^3 + \frac{337}{15} n^2 + \frac{106}{15} n + 1$ $1 \binom{n}{0} + 164 \binom{n}{1} + 2652 \binom{n}{2} + 12920 \binom{n}{3} + 26320 \binom{n}{4} + 23832 \binom{n}{5} + 7944 \binom{n}{6}$	1260	1045
7.14.41	(6,5,4,4,3,3,3)		
	$\frac{518}{45} n^6 + \frac{518}{15} n^5 + \frac{454}{9} n^4 + \frac{130}{3} n^3 + \frac{1037}{45} n^2 + \frac{107}{15} n + 1$ $1 \binom{n}{0} + 170 \binom{n}{1} + 2762 \binom{n}{2} + 13472 \binom{n}{3} + 27456 \binom{n}{4} + 24864 \binom{n}{5} + 8288 \binom{n}{6}$	2520	935
7.14.42	(6,5,4,4,4,3,2)		
	$\frac{4349}{360} n^6 + \frac{4349}{120} n^5 + \frac{3811}{72} n^4 + \frac{1091}{24} n^3 + \frac{2159}{90} n^2 + \frac{73}{10} n + 1$ $1 \binom{n}{0} + 178 \binom{n}{1} + 2898 \binom{n}{2} + 14138 \binom{n}{3} + 28814 \binom{n}{4} + 26094 \binom{n}{5} + 8698 \binom{n}{6}$	5040	823
7.14.43	(6,5,4,4,3,3,3)		
	$\frac{4147}{360} n^6 + \frac{4147}{120} n^5 + \frac{3635}{72} n^4 + \frac{347}{8} n^3 + \frac{4139}{180} n^2 + \frac{106}{15} n + 1$ $1 \binom{n}{0} + 170 \binom{n}{1} + 2764 \binom{n}{2} + 13482 \binom{n}{3} + 27476 \binom{n}{4} + 24882 \binom{n}{5} + 8294 \binom{n}{6}$	5040	928
7.14.44	(5,5,4,4,4,4,2)		
	$\frac{512}{45} n^6 + \frac{512}{15} n^5 + \frac{905}{18} n^4 + \frac{131}{3} n^3 + \frac{2101}{90} n^2 + \frac{36}{5} n + 1$ $1 \binom{n}{0} + 170 \binom{n}{1} + 2742 \binom{n}{2} + 13336 \binom{n}{3} + 27148 \binom{n}{4} + 24576 \binom{n}{5} + 8192 \binom{n}{6}$	315	960
7.14.45	(6,5,4,4,4,3,2)		
	$\frac{2141}{180} n^6 + \frac{2141}{60} n^5 + \frac{941}{18} n^4 + \frac{541}{12} n^3 + \frac{4289}{180} n^2 + \frac{217}{30} n + 1$ $1 \binom{n}{0} + 176 \binom{n}{1} + 2858 \binom{n}{2} + 13928 \binom{n}{3} + 28374 \binom{n}{4} + 25692 \binom{n}{5} + 8564 \binom{n}{6}$	2520	856
7.14.46	(5,5,5,4,4,3,2)		
	$\frac{176}{15} n^6 + \frac{176}{5} n^5 + 52 n^4 + \frac{136}{3} n^3 + \frac{364}{15} n^2 + \frac{112}{15} n + 1$ $1 \binom{n}{0} + 176 \binom{n}{1} + 2832 \binom{n}{2} + 13760 \binom{n}{3} + 28000 \binom{n}{4} + 25344 \binom{n}{5} + 8448 \binom{n}{6}$	1260	900
7.14.47	(5,5,5,4,3,3,3)		
	$\frac{1013}{90} n^6 + \frac{1013}{30} n^5 + \frac{1787}{36} n^4 + 43 n^3 + \frac{4159}{180} n^2 + \frac{217}{30} n + 1$ $1 \binom{n}{0} + 168 \binom{n}{1} + 2710 \binom{n}{2} + 13188 \binom{n}{3} + 26854 \binom{n}{4} + 24312 \binom{n}{5} + 8104 \binom{n}{6}$	1260	1005
7.14.48	(5,5,4,4,4,3,3)		
	$\frac{109}{10} n^6 + \frac{327}{10} n^5 + \frac{145}{3} n^4 + \frac{253}{6} n^3 + \frac{683}{30} n^2 + \frac{107}{15} n + 1$ $1 \binom{n}{0} + 164 \binom{n}{1} + 2632 \binom{n}{2} + 12784 \binom{n}{3} + 26012 \binom{n}{4} + 23544 \binom{n}{5} + 7848 \binom{n}{6}$	630	1080
7.14.49	(6,5,5,4,4,2,2)		
	$\frac{769}{60} n^6 + \frac{769}{20} n^5 + \frac{113}{2} n^4 + \frac{587}{12} n^3 + \frac{1541}{60} n^2 + \frac{229}{30} n + 1$ $1 \binom{n}{0} + 190 \binom{n}{1} + 3084 \binom{n}{2} + 15016 \binom{n}{3} + 30578 \binom{n}{4} + 27684 \binom{n}{5} + 9228 \binom{n}{6}$	1260	715

7.14.50	(6,5,4,4,4,3,2)	
	$\frac{359}{30} n^6 + \frac{359}{10} n^5 + \frac{211}{4} n^4 + \frac{137}{3} n^3 + \frac{1457}{60} n^2 + \frac{223}{30} n + 1$ $1\binom{n}{0} + 178\binom{n}{1} + 2880\binom{n}{2} + 14020\binom{n}{3} + 28550\binom{n}{4} + 25848\binom{n}{5} + 8616\binom{n}{6}$	$2520$ $\left \frac{359}{30}\right $ $855$ $8616$
7.14.51	(6,5,5,3,3,3,3)	
	$\frac{1057}{90} n^6 + \frac{1057}{30} n^5 + \frac{929}{18} n^4 + \frac{89}{2} n^3 + \frac{1064}{45} n^2 + \frac{109}{15} n + 1$ $1\binom{n}{0} + 174\binom{n}{1} + 2822\binom{n}{2} + 13752\binom{n}{3} + 28016\binom{n}{4} + 25368\binom{n}{5} + 8456\binom{n}{6}$	$1260$ $\left \frac{1057}{90}\right $ $897$ $8456$
7.14.52	(6,5,5,4,3,3,2)	
	$\frac{4429}{360} n^6 + \frac{4429}{120} n^5 + \frac{3893}{72} n^4 + \frac{373}{8} n^3 + \frac{4433}{180} n^2 + \frac{112}{15} n + 1$ $1\binom{n}{0} + 182\binom{n}{1} + 2956\binom{n}{2} + 14406\binom{n}{3} + 29348\binom{n}{4} + 26574\binom{n}{5} + 8858\binom{n}{6}$	$5040$ $\left \frac{4429}{360}\right $ $799$ $8858$
7.14.53	(6,5,5,4,3,3,2)	
	$\frac{1109}{90} n^6 + \frac{1109}{30} n^5 + \frac{1949}{36} n^4 + \frac{140}{3} n^3 + \frac{4417}{180} n^2 + \frac{221}{30} n + 1$ $1\binom{n}{0} + 182\binom{n}{1} + 2960\binom{n}{2} + 14428\binom{n}{3} + 29394\binom{n}{4} + 26616\binom{n}{5} + 8872\binom{n}{6}$	$1260$ $\left \frac{1109}{90}\right $ $792$ $8872$
7.14.54	(6,5,4,4,3,3,3)	
	$\frac{343}{30} n^6 + \frac{343}{10} n^5 + \frac{151}{3} n^4 + \frac{87}{2} n^3 + \frac{697}{30} n^2 + \frac{36}{5} n + 1$ $1\binom{n}{0} + 170\binom{n}{1} + 2750\binom{n}{2} + 13392\binom{n}{3} + 27276\binom{n}{4} + 24696\binom{n}{5} + 8232\binom{n}{6}$	$2520$ $\left \frac{343}{30}\right $ $960$ $8232$
7.14.55	(6,6,4,4,4,2,2)	
	$\frac{79}{6} n^6 + \frac{79}{2} n^5 + \frac{176}{3} n^4 + \frac{103}{2} n^3 + \frac{163}{6} n^2 + 8n + 1$ $1\binom{n}{0} + 198\binom{n}{1} + 3186\binom{n}{2} + 15456\binom{n}{3} + 31428\binom{n}{4} + 28440\binom{n}{5} + 9480\binom{n}{6}$	$210$ $\left \frac{79}{6}\right $ $700$ $9480$
7.14.56	(6,6,4,3,3,3,3)	
	$\frac{367}{30} n^6 + \frac{367}{10} n^5 + 54 n^4 + \frac{281}{6} n^3 + \frac{743}{30} n^2 + \frac{112}{15} n + 1$ $1\binom{n}{0} + 182\binom{n}{1} + 2946\binom{n}{2} + 14336\binom{n}{3} + 29188\binom{n}{4} + 26424\binom{n}{5} + 8808\binom{n}{6}$	$630$ $\left \frac{367}{30}\right $ $840$ $8808$
7.14.57	(6,6,4,4,3,3,2)	
	$\frac{2251}{180} n^6 + \frac{2251}{60} n^5 + \frac{497}{9} n^4 + \frac{575}{12} n^3 + \frac{4549}{180} n^2 + \frac{227}{30} n + 1$ $1\binom{n}{0} + 186\binom{n}{1} + 3012\binom{n}{2} + 14656\binom{n}{3} + 29838\binom{n}{4} + 27012\binom{n}{5} + 9004\binom{n}{6}$	$1260$ $\left \frac{2251}{180}\right $ $784$ $9004$
7.14.58	(6,5,5,3,3,3,3)	
	$\frac{176}{15} n^6 + \frac{176}{5} n^5 + \frac{157}{3} n^4 + 46 n^3 + \frac{374}{15} n^2 + \frac{39}{5} n + 1$ $1\binom{n}{0} + 178\binom{n}{1} + 2842\binom{n}{2} + 13776\binom{n}{3} + 28008\binom{n}{4} + 25344\binom{n}{5} + 8448\binom{n}{6}$	$105$ $\left \frac{176}{15}\right $ $945$ $8448$
7.14.59	(6,6,5,3,3,3,2)	
	$\frac{64}{5} n^6 + \frac{192}{5} n^5 + \frac{341}{6} n^4 + \frac{149}{3} n^3 + \frac{791}{30} n^2 + \frac{119}{15} n + 1$ $1\binom{n}{0} + 192\binom{n}{1} + 3092\binom{n}{2} + 15016\binom{n}{3} + 30548\binom{n}{4} + 27648\binom{n}{5} + 9216\binom{n}{6}$	$420$ $\left \frac{64}{5}\right $ $756$ $9216$
7.15.1	(5,5,5,5,5,3,2)	
	$\frac{67}{6} n^6 + \frac{67}{2} n^5 + 50 n^4 + \frac{265}{6} n^3 + \frac{143}{6} n^2 + \frac{22}{3} n + 1$ $1\binom{n}{0} + 170\binom{n}{1} + 2710\binom{n}{2} + 13120\binom{n}{3} + 26660\binom{n}{4} + 24120\binom{n}{5} + 8040\binom{n}{6}$	$420$ $\left \frac{67}{6}\right $ $1296$ $8040$

7.15.2	(5,5,5,5,4,4,2)	
	$\frac{643}{60} n^6 + \frac{643}{20} n^5 + \frac{577}{12} n^4 + \frac{511}{12} n^3 + \frac{116}{5} n^2 + \frac{109}{15} n + 1$ $1\binom{n}{0} + 164\binom{n}{1} + 2604\binom{n}{2} + 12596\binom{n}{3} + 25588\binom{n}{4} + 23148\binom{n}{5} + 7716\binom{n}{6}$	$840 \mid \frac{643}{60} \mid 1404$ $840 \mid \frac{643}{60} \mid 7716$
7.15.3	(5,5,5,5,4,3,3)	
	$\frac{103}{10} n^6 + \frac{309}{10} n^5 + \frac{275}{6} n^4 + \frac{241}{6} n^3 + \frac{328}{15} n^2 + \frac{104}{15} n + 1$ $1\binom{n}{0} + 156\binom{n}{1} + 2492\binom{n}{2} + 12088\binom{n}{3} + 24584\binom{n}{4} + 22248\binom{n}{5} + 7416\binom{n}{6}$	$2520 \mid \frac{103}{10} \mid 1572$ $2520 \mid \frac{103}{10} \mid 7416$
7.15.4	(5,5,5,5,4,3,3)	
	$\frac{92}{9} n^6 + \frac{92}{3} n^5 + \frac{823}{18} n^4 + \frac{121}{3} n^3 + \frac{397}{18} n^2 + 7n + 1$ $1\binom{n}{0} + 156\binom{n}{1} + 2480\binom{n}{2} + 12008\binom{n}{3} + 24404\binom{n}{4} + 22080\binom{n}{5} + 7360\binom{n}{6}$	$630 \mid \frac{92}{9} \mid 1584$ $630 \mid \frac{92}{9} \mid 7360$
7.15.5	(5,5,5,4,4,4,3)	
	$\frac{449}{45} n^6 + \frac{449}{15} n^5 + \frac{1603}{36} n^4 + \frac{235}{6} n^3 + \frac{3869}{180} n^2 + \frac{69}{10} n + 1$ $1\binom{n}{0} + 152\binom{n}{1} + 2418\binom{n}{2} + 11716\binom{n}{3} + 23818\binom{n}{4} + 21552\binom{n}{5} + 7184\binom{n}{6}$	$2520 \mid \frac{449}{45} \mid 1692$ $2520 \mid \frac{449}{45} \mid 7184$
7.15.6	(5,5,5,5,4,4,2)	
	$\frac{54}{5} n^6 + \frac{162}{5} n^5 + \frac{289}{6} n^4 + \frac{127}{3} n^3 + \frac{691}{30} n^2 + \frac{109}{15} n + 1$ $1\binom{n}{0} + 164\binom{n}{1} + 2616\binom{n}{2} + 12680\binom{n}{3} + 25780\binom{n}{4} + 23328\binom{n}{5} + 7776\binom{n}{6}$	$1260 \mid \frac{54}{5} \mid 1392$ $1260 \mid \frac{54}{5} \mid 7776$
7.15.7	(5,5,5,4,4,4,3)	
	$\frac{301}{30} n^6 + \frac{301}{10} n^5 + \frac{535}{12} n^4 + 39 n^3 + \frac{1283}{60} n^2 + \frac{69}{10} n + 1$ $1\binom{n}{0} + 152\binom{n}{1} + 2426\binom{n}{2} + 11772\binom{n}{3} + 23946\binom{n}{4} + 21672\binom{n}{5} + 7224\binom{n}{6}$	$840 \mid \frac{301}{30} \mid 1682$ $840 \mid \frac{301}{30} \mid 7224$
7.15.8	(5,5,5,4,4,4,3)	
	$\frac{1801}{180} n^6 + \frac{1801}{60} n^5 + \frac{401}{9} n^4 + \frac{469}{12} n^3 + \frac{3859}{180} n^2 + \frac{69}{10} n + 1$ $1\binom{n}{0} + 152\binom{n}{1} + 2422\binom{n}{2} + 11744\binom{n}{3} + 23882\binom{n}{4} + 21612\binom{n}{5} + 7204\binom{n}{6}$	$5040 \mid \frac{1801}{180} \mid 1687$ $5040 \mid \frac{1801}{180} \mid 7204$
7.15.9	(5,5,4,4,4,4,4)	
	$\frac{146}{15} n^6 + \frac{146}{5} n^5 + \frac{130}{3} n^4 + 38 n^3 + \frac{314}{15} n^2 + \frac{34}{5} n + 1$ $1\binom{n}{0} + 148\binom{n}{1} + 2356\binom{n}{2} + 11424\binom{n}{3} + 23232\binom{n}{4} + 21024\binom{n}{5} + 7008\binom{n}{6}$	$2520 \mid \frac{146}{15} \mid 1807$ $2520 \mid \frac{146}{15} \mid 7008$
7.15.10	(6,4,4,4,4,4)	
	$\frac{99}{10} n^6 + \frac{297}{10} n^5 + 44 n^4 + \frac{77}{2} n^3 + \frac{211}{10} n^2 + \frac{34}{5} n + 1$ $1\binom{n}{0} + 150\binom{n}{1} + 2394\binom{n}{2} + 11616\binom{n}{3} + 23628\binom{n}{4} + 21384\binom{n}{5} + 7128\binom{n}{6}$	$420 \mid \frac{99}{10} \mid 1728$ $420 \mid \frac{99}{10} \mid 7128$
7.15.11	(5,5,4,4,4,4,4)	
	$\frac{39}{4} n^6 + \frac{117}{4} n^5 + \frac{130}{3} n^4 + \frac{455}{12} n^3 + \frac{251}{12} n^2 + \frac{41}{6} n + 1$ $1\binom{n}{0} + 148\binom{n}{1} + 2358\binom{n}{2} + 11440\binom{n}{3} + 23270\binom{n}{4} + 21060\binom{n}{5} + 7020\binom{n}{6}$	$252 \mid \frac{39}{4} \mid 1805$ $252 \mid \frac{39}{4} \mid 7020$
7.15.12	(6,5,4,4,4,4,3)	
	$\frac{1831}{180} n^6 + \frac{1831}{60} n^5 + \frac{407}{9} n^4 + \frac{475}{12} n^3 + \frac{3889}{180} n^2 + \frac{69}{10} n + 1$ $1\binom{n}{0} + 154\binom{n}{1} + 2460\binom{n}{2} + 11936\binom{n}{3} + 24278\binom{n}{4} + 21972\binom{n}{5} + 7324\binom{n}{6}$	$2520 \mid \frac{1831}{180} \mid 1615$ $2520 \mid \frac{1831}{180} \mid 7324$

7.15.13	(5,5,5,4,4,4,3)		
	$\frac{101}{10} n^6 + \frac{303}{10} n^5 + \frac{541}{12} n^4 + \frac{119}{3} n^3 + \frac{1309}{60} n^2 + \frac{211}{30} n + 1$ $1 \binom{n}{0} + 154 \binom{n}{1} + 2448 \binom{n}{2} + 11860 \binom{n}{3} + 24110 \binom{n}{4} + 21816 \binom{n}{5} + 7272 \binom{n}{6}$	1260	1675 $\frac{101}{10}$ 7272
7.15.14	(5,5,4,4,4,4,4)		
	$\frac{49}{5} n^6 + \frac{147}{5} n^5 + \frac{263}{6} n^4 + \frac{116}{3} n^3 + \frac{641}{30} n^2 + \frac{104}{15} n + 1$ $1 \binom{n}{0} + 150 \binom{n}{1} + 2378 \binom{n}{2} + 11512 \binom{n}{3} + 23396 \binom{n}{4} + 21168 \binom{n}{5} + 7056 \binom{n}{6}$	315	1800 $\frac{49}{5}$ 7056
7.15.15	(6,5,5,4,4,3,3)		
	$\frac{158}{15} n^6 + \frac{158}{5} n^5 + 47 n^4 + \frac{124}{3} n^3 + \frac{337}{15} n^2 + \frac{106}{15} n + 1$ $1 \binom{n}{0} + 160 \binom{n}{1} + 2552 \binom{n}{2} + 12368 \binom{n}{3} + 25144 \binom{n}{4} + 22752 \binom{n}{5} + 7584 \binom{n}{6}$	1260	1495 $\frac{158}{15}$ 7584
7.15.16	(6,5,5,4,4,3,3)		
	$\frac{3811}{360} n^6 + \frac{3811}{120} n^5 + \frac{3389}{72} n^4 + \frac{989}{24} n^3 + \frac{2011}{90} n^2 + \frac{211}{30} n + 1$ $1 \binom{n}{0} + 160 \binom{n}{1} + 2560 \binom{n}{2} + 12422 \binom{n}{3} + 25266 \binom{n}{4} + 22866 \binom{n}{5} + 7622 \binom{n}{6}$	2520	1488 $\frac{3811}{360}$ 7622
7.15.17	(6,5,5,4,4,4,2)		
	$\frac{166}{15} n^6 + \frac{166}{5} n^5 + \frac{593}{12} n^4 + \frac{87}{2} n^3 + \frac{1411}{60} n^2 + \frac{73}{10} n + 1$ $1 \binom{n}{0} + 168 \binom{n}{1} + 2682 \binom{n}{2} + 12996 \binom{n}{3} + 26418 \binom{n}{4} + 23904 \binom{n}{5} + 7968 \binom{n}{6}$	1260	1320 $\frac{166}{15}$ 7968
7.15.18	(6,5,4,4,4,4,3)		
	$\frac{185}{18} n^6 + \frac{185}{6} n^5 + \frac{412}{9} n^4 + \frac{241}{6} n^3 + \frac{395}{18} n^2 + 7 n + 1$ $1 \binom{n}{0} + 156 \binom{n}{1} + 2488 \binom{n}{2} + 12064 \binom{n}{3} + 24532 \binom{n}{4} + 22200 \binom{n}{5} + 7400 \binom{n}{6}$	2520	1600 $\frac{185}{18}$ 7400
7.15.19	(6,6,4,4,4,3,3)		
	$11 n^6 + 33 n^5 + \frac{148}{3} n^4 + \frac{131}{3} n^3 + \frac{71}{3} n^2 + \frac{22}{3} n + 1$ $1 \binom{n}{0} + 168 \binom{n}{1} + 2672 \binom{n}{2} + 12928 \binom{n}{3} + 26264 \binom{n}{4} + 23760 \binom{n}{5} + 7920 \binom{n}{6}$	210	1400 11 7920
7.15.20	(5,5,5,4,4,4,3)		
	$\frac{99}{10} n^6 + \frac{297}{10} n^5 + \frac{89}{2} n^4 + \frac{79}{2} n^3 + \frac{108}{5} n^2 + \frac{34}{5} n + 1$ $1 \binom{n}{0} + 152 \binom{n}{1} + 2408 \binom{n}{2} + 11640 \binom{n}{3} + 23640 \binom{n}{4} + 21384 \binom{n}{5} + 7128 \binom{n}{6}$	140	1728 $\frac{99}{10}$ 7128
7.15.21	(5,5,4,4,4,4,4)		
	$\frac{581}{60} n^6 + \frac{581}{20} n^5 + \frac{130}{3} n^4 + \frac{153}{4} n^3 + \frac{1259}{60} n^2 + \frac{67}{10} n + 1$ $1 \binom{n}{0} + 148 \binom{n}{1} + 2350 \binom{n}{2} + 11376 \binom{n}{3} + 23118 \binom{n}{4} + 20916 \binom{n}{5} + 6972 \binom{n}{6}$	420	1840 $\frac{581}{60}$ 6972
7.15.22	(6,4,4,4,4,4,4)		
	$\frac{49}{5} n^6 + \frac{147}{5} n^5 + 44 n^4 + 39 n^3 + \frac{106}{5} n^2 + \frac{33}{5} n + 1$ $1 \binom{n}{0} + 150 \binom{n}{1} + 2382 \binom{n}{2} + 11520 \binom{n}{3} + 23400 \binom{n}{4} + 21168 \binom{n}{5} + 7056 \binom{n}{6}$	70	1792 $\frac{49}{5}$ 7056
7.15.23	(5,5,5,5,4,3,3)		
	$\frac{1843}{180} n^6 + \frac{1843}{60} n^5 + \frac{823}{18} n^4 + \frac{161}{4} n^3 + \frac{3967}{180} n^2 + \frac{211}{30} n + 1$ $1 \binom{n}{0} + 156 \binom{n}{1} + 2482 \binom{n}{2} + 12024 \binom{n}{3} + 24442 \binom{n}{4} + 22116 \binom{n}{5} + 7372 \binom{n}{6}$	1260	1615 $\frac{1843}{180}$ 7372

7.15.24	(5,5,5,5,4,4,2)			
	$\frac{481}{45} n^6 + \frac{481}{15} n^5 + \frac{865}{18} n^4 + \frac{128}{3} n^3 + \frac{2093}{90} n^2 + \frac{109}{15} n + 1$ $1\binom{n}{0} + 164\binom{n}{1} + 2600\binom{n}{2} + 12568\binom{n}{3} + 25524\binom{n}{4} + 23088\binom{n}{5} + 7696\binom{n}{6}$	630	1440	$\frac{481}{45}$ 7696
7.15.25	(5,5,5,4,4,4,3)			
	$\frac{449}{45} n^6 + \frac{449}{15} n^5 + \frac{1603}{36} n^4 + \frac{235}{6} n^3 + \frac{3869}{180} n^2 + \frac{69}{10} n + 1$ $1\binom{n}{0} + 152\binom{n}{1} + 2418\binom{n}{2} + 11716\binom{n}{3} + 23818\binom{n}{4} + 21552\binom{n}{5} + 7184\binom{n}{6}$	1260	1720	$\frac{449}{45}$ 7184
7.15.26	(5,5,5,4,4,4,3)			
	$\frac{149}{15} n^6 + \frac{149}{5} n^5 + \frac{89}{2} n^4 + \frac{118}{3} n^3 + \frac{647}{30} n^2 + \frac{103}{15} n + 1$ $1\binom{n}{0} + 152\binom{n}{1} + 2412\binom{n}{2} + 11672\binom{n}{3} + 23716\binom{n}{4} + 21456\binom{n}{5} + 7152\binom{n}{6}$	1260	1728	$\frac{149}{15}$ 7152
7.15.27	(6,5,5,5,3,3,3)			
	$\frac{643}{60} n^6 + \frac{643}{20} n^5 + \frac{143}{3} n^4 + \frac{167}{4} n^3 + \frac{1357}{60} n^2 + \frac{71}{10} n + 1$ $1\binom{n}{0} + 162\binom{n}{1} + 2592\binom{n}{2} + 12576\binom{n}{3} + 25578\binom{n}{4} + 23148\binom{n}{5} + 7716\binom{n}{6}$	840	1445	$\frac{643}{60}$ 7716
7.15.28	(6,5,5,4,4,3,3)			
	$\frac{125}{12} n^6 + \frac{125}{4} n^5 + \frac{557}{12} n^4 + \frac{163}{4} n^3 + \frac{133}{6} n^2 + 7n + 1$ $1\binom{n}{0} + 158\binom{n}{1} + 2522\binom{n}{2} + 12228\binom{n}{3} + 24864\binom{n}{4} + 22500\binom{n}{5} + 7500\binom{n}{6}$	5040	1543	$\frac{125}{12}$ 7500
7.15.29	(6,5,5,5,4,3,2)			
	$\frac{2017}{180} n^6 + \frac{2017}{60} n^5 + \frac{901}{18} n^4 + \frac{529}{12} n^3 + \frac{4273}{180} n^2 + \frac{73}{10} n + 1$ $1\binom{n}{0} + 170\binom{n}{1} + 2716\binom{n}{2} + 13160\binom{n}{3} + 26750\binom{n}{4} + 24204\binom{n}{5} + 8068\binom{n}{6}$	2520	1284	$\frac{2017}{180}$ 8068
7.15.30	(6,5,5,4,4,4,2)			
	$\frac{983}{90} n^6 + \frac{983}{30} n^5 + \frac{1757}{36} n^4 + 43n^3 + \frac{4189}{180} n^2 + \frac{217}{30} n + 1$ $1\binom{n}{0} + 166\binom{n}{1} + 2648\binom{n}{2} + 12828\binom{n}{3} + 26074\binom{n}{4} + 23592\binom{n}{5} + 7864\binom{n}{6}$	2520	1368	$\frac{983}{90}$ 7864
7.15.31	(6,5,5,4,4,3,3)			
	$\frac{469}{45} n^6 + \frac{469}{15} n^5 + \frac{1673}{36} n^4 + \frac{245}{6} n^3 + \frac{3979}{180} n^2 + \frac{69}{10} n + 1$ $1\binom{n}{0} + 158\binom{n}{1} + 2524\binom{n}{2} + 12236\binom{n}{3} + 24878\binom{n}{4} + 22512\binom{n}{5} + 7504\binom{n}{6}$	1260	1536	$\frac{469}{45}$ 7504
7.15.32	(6,5,4,4,4,4,3)			
	$\frac{1823}{180} n^6 + \frac{1823}{60} n^5 + \frac{1627}{36} n^4 + \frac{159}{4} n^3 + \frac{1951}{90} n^2 + \frac{103}{15} n + 1$ $1\binom{n}{0} + 154\binom{n}{1} + 2454\binom{n}{2} + 11892\binom{n}{3} + 24176\binom{n}{4} + 21876\binom{n}{5} + 7292\binom{n}{6}$	2520	1648	$\frac{1823}{180}$ 7292
7.15.33	(6,6,4,4,4,3,3)			
	$\frac{107}{10} n^6 + \frac{321}{10} n^5 + \frac{143}{3} n^4 + \frac{251}{6} n^3 + \frac{679}{30} n^2 + \frac{106}{15} n + 1$ $1\binom{n}{0} + 162\binom{n}{1} + 2590\binom{n}{2} + 12560\binom{n}{3} + 25540\binom{n}{4} + 23112\binom{n}{5} + 7704\binom{n}{6}$	1260	1463	$\frac{107}{10}$ 7704
7.15.34	(6,6,4,4,4,4,2)			
	$\frac{497}{45} n^6 + \frac{497}{15} n^5 + \frac{445}{9} n^4 + \frac{131}{3} n^3 + \frac{1058}{45} n^2 + \frac{36}{5} n + 1$ $1\binom{n}{0} + 168\binom{n}{1} + 2680\binom{n}{2} + 12976\binom{n}{3} + 26368\binom{n}{4} + 23856\binom{n}{5} + 7952\binom{n}{6}$	315	1344	$\frac{497}{45}$ 7952

7.15.35	(6,5,5,4,4,3,3)		
	$\frac{313}{30} n^6 + \frac{313}{10} n^5 + \frac{281}{6} n^4 + \frac{83}{2} n^3 + \frac{341}{15} n^2 + \frac{36}{5} n + 1$ $1 \binom{n}{0} + 160 \binom{n}{1} + 2536 \binom{n}{2} + 12264 \binom{n}{3} + 24912 \binom{n}{4} + 22536 \binom{n}{5} + 7512 \binom{n}{6}$	630	1575
7.15.36	(6,6,5,4,4,3,2)		
	$\frac{57}{5} n^6 + \frac{171}{5} n^5 + \frac{307}{6} n^4 + \frac{136}{3} n^3 + \frac{733}{30} n^2 + \frac{112}{15} n + 1$ $1 \binom{n}{0} + 174 \binom{n}{1} + 2770 \binom{n}{2} + 13400 \binom{n}{3} + 27220 \binom{n}{4} + 24624 \binom{n}{5} + 8208 \binom{n}{6}$	1260	1260
7.15.37	(6,6,5,4,3,3,3)		
	$\frac{983}{90} n^6 + \frac{983}{30} n^5 + \frac{1757}{36} n^4 + 43 n^3 + \frac{4189}{180} n^2 + \frac{217}{30} n + 1$ $1 \binom{n}{0} + 166 \binom{n}{1} + 2648 \binom{n}{2} + 12828 \binom{n}{3} + 26074 \binom{n}{4} + 23592 \binom{n}{5} + 7864 \binom{n}{6}$	1260	1407
7.15.38	(6,6,6,3,3,3,3)		
	$\frac{57}{5} n^6 + \frac{171}{5} n^5 + \frac{103}{2} n^4 + 46 n^3 + \frac{251}{10} n^2 + \frac{39}{5} n + 1$ $1 \binom{n}{0} + 176 \binom{n}{1} + 2780 \binom{n}{2} + 13416 \binom{n}{3} + 27228 \binom{n}{4} + 24624 \binom{n}{5} + 8208 \binom{n}{6}$	35	1323
7.16.1	(5,5,5,5,4,3)		
	$\frac{93}{10} n^6 + \frac{279}{10} n^5 + \frac{127}{3} n^4 + \frac{229}{6} n^3 + \frac{641}{30} n^2 + \frac{104}{15} n + 1$ $1 \binom{n}{0} + 146 \binom{n}{1} + 2278 \binom{n}{2} + 10960 \binom{n}{3} + 22220 \binom{n}{4} + 20088 \binom{n}{5} + 6696 \binom{n}{6}$	420	2592
7.16.2	(5,5,5,5,5,2)		
	$10 n^6 + 30 n^5 + \frac{275}{6} n^4 + \frac{125}{3} n^3 + \frac{139}{6} n^2 + \frac{22}{3} n + 1$ $1 \binom{n}{0} + 158 \binom{n}{1} + 2458 \binom{n}{2} + 11800 \binom{n}{3} + 23900 \binom{n}{4} + 21600 \binom{n}{5} + 7200 \binom{n}{6}$	105	2160
7.16.3	(5,5,5,5,4,3)		
	$\frac{841}{90} n^6 + \frac{841}{30} n^5 + \frac{1525}{36} n^4 + 38 n^3 + \frac{3833}{180} n^2 + \frac{209}{30} n + 1$ $1 \binom{n}{0} + 146 \binom{n}{1} + 2284 \binom{n}{2} + 11004 \binom{n}{3} + 22322 \binom{n}{4} + 20184 \binom{n}{5} + 6728 \binom{n}{6}$	1260	2580
7.16.4	(6,5,5,5,4,2)		
	$\frac{307}{30} n^6 + \frac{307}{10} n^5 + \frac{559}{12} n^4 + 42 n^3 + \frac{1391}{60} n^2 + \frac{73}{10} n + 1$ $1 \binom{n}{0} + 160 \binom{n}{1} + 2506 \binom{n}{2} + 12060 \binom{n}{3} + 24450 \binom{n}{4} + 22104 \binom{n}{5} + 7368 \binom{n}{6}$	840	2052
7.16.5	(6,5,5,5,3,3)		
	$\frac{881}{90} n^6 + \frac{881}{30} n^5 + \frac{1595}{36} n^4 + \frac{119}{3} n^3 + \frac{3943}{180} n^2 + \frac{209}{30} n + 1$ $1 \binom{n}{0} + 152 \binom{n}{1} + 2390 \binom{n}{2} + 11524 \binom{n}{3} + 23382 \binom{n}{4} + 21144 \binom{n}{5} + 7048 \binom{n}{6}$	630	2304
7.16.6	(6,5,5,5,4,3)		
	$\frac{1709}{180} n^6 + \frac{1709}{60} n^5 + \frac{1549}{36} n^4 + \frac{463}{12} n^3 + \frac{1933}{90} n^2 + \frac{104}{15} n + 1$ $1 \binom{n}{0} + 148 \binom{n}{1} + 2320 \binom{n}{2} + 11180 \binom{n}{3} + 22680 \binom{n}{4} + 20508 \binom{n}{5} + 6836 \binom{n}{6}$	2520	2472
7.16.7	(5,5,5,5,4,4,4)		
	$\frac{91}{10} n^6 + \frac{273}{10} n^5 + \frac{247}{6} n^4 + \frac{221}{6} n^3 + \frac{311}{15} n^2 + \frac{103}{15} n + 1$ $1 \binom{n}{0} + 142 \binom{n}{1} + 2222 \binom{n}{2} + 10712 \binom{n}{3} + 21736 \binom{n}{4} + 19656 \binom{n}{5} + 6552 \binom{n}{6}$	1260	2755

7.16.8	(5,5,5,5,4,4,4)		
	$\frac{109}{12} n^6 + \frac{109}{4} n^5 + \frac{247}{6} n^4 + \frac{443}{12} n^3 + \frac{83}{4} n^2 + \frac{41}{6} n + 1$ $1 \binom{n}{0} + 142 \binom{n}{1} + 2220 \binom{n}{2} + 10696 \binom{n}{3} + 21698 \binom{n}{4} + 19620 \binom{n}{5} + 6540 \binom{n}{6}$	1260 $\frac{109}{12}$	2760 6540
7.16.9	(6,5,5,5,4,4,3)		
	$\frac{857}{90} n^6 + \frac{857}{30} n^5 + \frac{775}{18} n^4 + \frac{77}{2} n^3 + \frac{964}{45} n^2 + \frac{104}{15} n + 1$ $1 \binom{n}{0} + 148 \binom{n}{1} + 2324 \binom{n}{2} + 11208 \binom{n}{3} + 22744 \binom{n}{4} + 20568 \binom{n}{5} + 6856 \binom{n}{6}$	2520 $\frac{857}{90}$	2465 6856
7.16.10	(6,5,5,4,4,4,4)		
	$\frac{37}{4} n^6 + \frac{111}{4} n^5 + \frac{251}{6} n^4 + \frac{449}{12} n^3 + \frac{251}{12} n^2 + \frac{41}{6} n + 1$ $1 \binom{n}{0} + 144 \binom{n}{1} + 2258 \binom{n}{2} + 10888 \binom{n}{3} + 22094 \binom{n}{4} + 19980 \binom{n}{5} + 6660 \binom{n}{6}$	2520 $\frac{37}{4}$	2640 6660
7.16.11	(6,6,4,4,4,4,4)		
	$\frac{113}{12} n^6 + \frac{113}{4} n^5 + \frac{85}{2} n^4 + \frac{455}{12} n^3 + \frac{253}{12} n^2 + \frac{41}{6} n + 1$ $1 \binom{n}{0} + 146 \binom{n}{1} + 2296 \binom{n}{2} + 11080 \binom{n}{3} + 22490 \binom{n}{4} + 20340 \binom{n}{5} + 6780 \binom{n}{6}$	252 $\frac{113}{12}$	2527 6780
7.16.12	(6,5,5,4,4,4,4)		
	$\frac{28}{3} n^6 + 28 n^5 + \frac{127}{3} n^4 + 38 n^3 + \frac{64}{3} n^2 + 7 n + 1$ $1 \binom{n}{0} + 146 \binom{n}{1} + 2282 \binom{n}{2} + 10992 \binom{n}{3} + 22296 \binom{n}{4} + 20160 \binom{n}{5} + 6720 \binom{n}{6}$	315 $\frac{28}{3}$	2625 6720
7.16.13	(6,6,5,4,4,4,3)		
	$\frac{293}{30} n^6 + \frac{293}{10} n^5 + \frac{177}{4} n^4 + \frac{119}{3} n^3 + \frac{1319}{60} n^2 + \frac{211}{30} n + 1$ $1 \binom{n}{0} + 152 \binom{n}{1} + 2386 \binom{n}{2} + 11500 \binom{n}{3} + 23330 \binom{n}{4} + 21096 \binom{n}{5} + 7032 \binom{n}{6}$	1260 $\frac{293}{30}$	2345 7032
7.16.14	(5,5,5,5,4,4,4)		
	$\frac{136}{15} n^6 + \frac{136}{5} n^5 + \frac{247}{6} n^4 + 37 n^3 + \frac{623}{30} n^2 + \frac{34}{5} n + 1$ $1 \binom{n}{0} + 142 \binom{n}{1} + 2218 \binom{n}{2} + 10680 \binom{n}{3} + 21660 \binom{n}{4} + 19584 \binom{n}{5} + 6528 \binom{n}{6}$	105 $\frac{136}{15}$	2800 6528
7.16.15	(6,5,5,4,4,4,4)		
	$\frac{46}{5} n^6 + \frac{138}{5} n^5 + \frac{251}{6} n^4 + \frac{113}{3} n^3 + \frac{629}{30} n^2 + \frac{101}{15} n + 1$ $1 \binom{n}{0} + 144 \binom{n}{1} + 2252 \binom{n}{2} + 10840 \binom{n}{3} + 21980 \binom{n}{4} + 19872 \binom{n}{5} + 6624 \binom{n}{6}$	420 $\frac{46}{5}$	2688 6624
7.16.16	(6,5,5,5,4,4,3)		
	$\frac{142}{15} n^6 + \frac{142}{5} n^5 + 43 n^4 + \frac{116}{3} n^3 + \frac{323}{15} n^2 + \frac{104}{15} n + 1$ $1 \binom{n}{0} + 148 \binom{n}{1} + 2316 \binom{n}{2} + 11152 \binom{n}{3} + 22616 \binom{n}{4} + 20448 \binom{n}{5} + 6816 \binom{n}{6}$	1260 $\frac{142}{15}$	2520 6816
7.16.17	(6,6,5,5,4,3,3)		
	$\frac{1783}{180} n^6 + \frac{1783}{60} n^5 + \frac{404}{9} n^4 + \frac{161}{4} n^3 + \frac{3997}{180} n^2 + \frac{211}{30} n + 1$ $1 \binom{n}{0} + 154 \binom{n}{1} + 2420 \binom{n}{2} + 11664 \binom{n}{3} + 23662 \binom{n}{4} + 21396 \binom{n}{5} + 7132 \binom{n}{6}$	1260 $\frac{1783}{180}$	2261 7132
7.16.18	(6,6,5,5,4,4,2)		
	$\frac{466}{45} n^6 + \frac{466}{15} n^5 + \frac{425}{9} n^4 + \frac{128}{3} n^3 + \frac{1054}{45} n^2 + \frac{109}{15} n + 1$ $1 \binom{n}{0} + 162 \binom{n}{1} + 2538 \binom{n}{2} + 12208 \binom{n}{3} + 24744 \binom{n}{4} + 22368 \binom{n}{5} + 7456 \binom{n}{6}$	630 $\frac{466}{45}$	2016 7456

7.16.19	(6,6,5,4,4,4,3)		
	$\frac{434}{45} n^6 + \frac{434}{15} n^5 + \frac{1573}{36} n^4 + \frac{235}{6} n^3 + \frac{3899}{180} n^2 + \frac{69}{10} n + 1$ $1 \binom{n}{0} + 150 \binom{n}{1} + 2356 \binom{n}{2} + 11356 \binom{n}{3} + 23038 \binom{n}{4} + 20832 \binom{n}{5} + 6944 \binom{n}{6}$	1260	2408
7.16.20	(6,6,6,4,4,3,3)		
	$\frac{101}{10} n^6 + \frac{303}{10} n^5 + 46 n^4 + \frac{83}{2} n^3 + \frac{229}{10} n^2 + \frac{36}{5} n + 1$ $1 \binom{n}{0} + 158 \binom{n}{1} + 2474 \binom{n}{2} + 11904 \binom{n}{3} + 24132 \binom{n}{4} + 21816 \binom{n}{5} + 7272 \binom{n}{6}$	210	2205
7.17.1	(5,5,5,5,5,5,4)		
	$\frac{127}{15} n^6 + \frac{127}{5} n^5 + 39 n^4 + \frac{107}{3} n^3 + \frac{308}{15} n^2 + \frac{104}{15} n + 1$ $1 \binom{n}{0} + 136 \binom{n}{1} + 2088 \binom{n}{2} + 10000 \binom{n}{3} + 20240 \binom{n}{4} + 18288 \binom{n}{5} + 6096 \binom{n}{6}$	315	4200
7.17.2	(6,5,5,5,5,4,4)		
	$\frac{43}{5} n^6 + \frac{129}{5} n^5 + \frac{119}{3} n^4 + \frac{109}{3} n^3 + \frac{311}{15} n^2 + \frac{103}{15} n + 1$ $1 \binom{n}{0} + 138 \binom{n}{1} + 2122 \binom{n}{2} + 10160 \binom{n}{3} + 20560 \binom{n}{4} + 18576 \binom{n}{5} + 6192 \binom{n}{6}$	630	4032
7.17.3	(6,5,5,5,5,5,3)		
	$\frac{53}{6} n^6 + \frac{53}{2} n^5 + \frac{245}{6} n^4 + \frac{75}{2} n^3 + \frac{64}{3} n^2 + 7 n + 1$ $1 \binom{n}{0} + 142 \binom{n}{1} + 2182 \binom{n}{2} + 10440 \binom{n}{3} + 21120 \binom{n}{4} + 19080 \binom{n}{5} + 6360 \binom{n}{6}$	420	3780
7.17.4	(6,6,5,5,5,5,2)		
	$\frac{29}{3} n^6 + 29 n^5 + 45 n^4 + \frac{125}{3} n^3 + \frac{70}{3} n^2 + \frac{22}{3} n + 1$ $1 \binom{n}{0} + 156 \binom{n}{1} + 2396 \binom{n}{2} + 11440 \binom{n}{3} + 23120 \binom{n}{4} + 20880 \binom{n}{5} + 6960 \binom{n}{6}$	105	3024
7.17.5	(6,6,5,5,5,4,3)		
	$\frac{811}{90} n^6 + \frac{811}{30} n^5 + \frac{1495}{36} n^4 + 38 n^3 + \frac{3863}{180} n^2 + \frac{209}{30} n + 1$ $1 \binom{n}{0} + 144 \binom{n}{1} + 2222 \binom{n}{2} + 10644 \binom{n}{3} + 21542 \binom{n}{4} + 19464 \binom{n}{5} + 6488 \binom{n}{6}$	1260	3612
7.17.6	(6,5,5,5,5,4,4)		
	$\frac{517}{60} n^6 + \frac{517}{20} n^5 + \frac{119}{3} n^4 + \frac{145}{4} n^3 + \frac{1243}{60} n^2 + \frac{69}{10} n + 1$ $1 \binom{n}{0} + 138 \binom{n}{1} + 2124 \binom{n}{2} + 10176 \binom{n}{3} + 20598 \binom{n}{4} + 18612 \binom{n}{5} + 6204 \binom{n}{6}$	1260	4025
7.17.7	(6,6,5,5,4,4,4)		
	$\frac{263}{30} n^6 + \frac{263}{10} n^5 + \frac{121}{3} n^4 + \frac{221}{6} n^3 + \frac{209}{10} n^2 + \frac{103}{15} n + 1$ $1 \binom{n}{0} + 140 \binom{n}{1} + 2160 \binom{n}{2} + 10352 \binom{n}{3} + 20956 \binom{n}{4} + 18936 \binom{n}{5} + 6312 \binom{n}{6}$	1260	3857
7.17.8	(6,6,6,4,4,4,4)		
	$9 n^6 + 27 n^5 + \frac{83}{2} n^4 + 38 n^3 + \frac{43}{2} n^2 + 7 n + 1$ $1 \binom{n}{0} + 144 \binom{n}{1} + 2220 \binom{n}{2} + 10632 \binom{n}{3} + 21516 \binom{n}{4} + 19440 \binom{n}{5} + 6480 \binom{n}{6}$	105	3675
7.17.9	(6,6,5,5,4,4,4)		
	$\frac{131}{15} n^6 + \frac{131}{5} n^5 + \frac{121}{3} n^4 + 37 n^3 + \frac{314}{15} n^2 + \frac{34}{5} n + 1$ $1 \binom{n}{0} + 140 \binom{n}{1} + 2156 \binom{n}{2} + 10320 \binom{n}{3} + 20880 \binom{n}{4} + 18864 \binom{n}{5} + 6288 \binom{n}{6}$	210	3920

7.17.10	(6,6,6,5,4,4,3)
	$\frac{137}{15} n^6 + \frac{137}{5} n^5 + \frac{253}{6} n^4 + \frac{116}{3} n^3 + \frac{217}{10} n^2 + \frac{104}{15} n + 1$ $1\binom{n}{0} + 146\binom{n}{1} + 2254\binom{n}{2} + 10792\binom{n}{3} + 21836\binom{n}{4} + 19728\binom{n}{5} + 6576\binom{n}{6}$
7.18.1	(6,5,5,5,5,5,5)
	$8n^6 + 24n^5 + \frac{75}{2}n^4 + 35n^3 + \frac{41}{2}n^2 + 7n + 1$ $1\binom{n}{0} + 132\binom{n}{1} + 1992\binom{n}{2} + 9480\binom{n}{3} + 19140\binom{n}{4} + 17280\binom{n}{5} + 5760\binom{n}{6}$
7.18.2	(6,6,5,5,5,4)
	$\frac{122}{15} n^6 + \frac{122}{5} n^5 + \frac{229}{6} n^4 + \frac{107}{3} n^3 + \frac{207}{10} n^2 + \frac{104}{15} n + 1$ $1\binom{n}{0} + 134\binom{n}{1} + 2026\binom{n}{2} + 9640\binom{n}{3} + 19460\binom{n}{4} + 17568\binom{n}{5} + 5856\binom{n}{6}$
7.18.3	(6,6,6,5,5,5,3)
	$\frac{17}{2} n^6 + \frac{51}{2} n^5 + 40 n^4 + \frac{75}{2} n^3 + \frac{43}{2} n^2 + 7n + 1$ $1\binom{n}{0} + 140\binom{n}{1} + 2120\binom{n}{2} + 10080\binom{n}{3} + 20340\binom{n}{4} + 18360\binom{n}{5} + 6120\binom{n}{6}$
7.18.4	(6,6,6,5,5,4,4)
	$\frac{497}{60} n^6 + \frac{497}{20} n^5 + \frac{233}{6} n^4 + \frac{145}{4} n^3 + \frac{1253}{60} n^2 + \frac{69}{10} n + 1$ $1\binom{n}{0} + 136\binom{n}{1} + 2062\binom{n}{2} + 9816\binom{n}{3} + 19818\binom{n}{4} + 17892\binom{n}{5} + 5964\binom{n}{6}$
7.18.5	(6,6,6,6,4,4,4)
	$\frac{42}{5} n^6 + \frac{126}{5} n^5 + \frac{79}{2} n^4 + 37 n^3 + \frac{211}{10} n^2 + \frac{34}{5} n + 1$ $1\binom{n}{0} + 138\binom{n}{1} + 2094\binom{n}{2} + 9960\binom{n}{3} + 20100\binom{n}{4} + 18144\binom{n}{5} + 6048\binom{n}{6}$
7.19.1	(6,6,6,5,5,5)
	$\frac{23}{3} n^6 + 23 n^5 + \frac{110}{3} n^4 + 35 n^3 + \frac{62}{3} n^2 + 7n + 1$ $1\binom{n}{0} + 130\binom{n}{1} + 1930\binom{n}{2} + 9120\binom{n}{3} + 18360\binom{n}{4} + 16560\binom{n}{5} + 5520\binom{n}{6}$
7.19.2	(6,6,6,6,5,5,4)
	$\frac{39}{5} n^6 + \frac{117}{5} n^5 + \frac{112}{3} n^4 + \frac{107}{3} n^3 + \frac{313}{15} n^2 + \frac{104}{15} n + 1$ $1\binom{n}{0} + 132\binom{n}{1} + 1964\binom{n}{2} + 9280\binom{n}{3} + 18680\binom{n}{4} + 16848\binom{n}{5} + 5616\binom{n}{6}$
7.20.1	(6,6,6,6,5,5)
	$\frac{22}{3} n^6 + 22 n^5 + \frac{215}{6} n^4 + 35 n^3 + \frac{125}{6} n^2 + 7n + 1$ $1\binom{n}{0} + 128\binom{n}{1} + 1868\binom{n}{2} + 8760\binom{n}{3} + 17580\binom{n}{4} + 15840\binom{n}{5} + 5280\binom{n}{6}$
7.21.1	(6,6,6,6,6,6)
	$7 n^6 + 21 n^5 + 35 n^4 + 35 n^3 + 21 n^2 + 7n + 1$ $1\binom{n}{0} + 126\binom{n}{1} + 1806\binom{n}{2} + 8400\binom{n}{3} + 16800\binom{n}{4} + 15120\binom{n}{5} + 5040\binom{n}{6}$

Ce travail est une mise à jour du travail suivant : Table for the Mayer graph weight of 2-connected graphs of size 7, [<http://www.lacim.uqam.ca/kaouche/TableauMayer7.pdf>].