

Perfect and Optimal Rulers

Note that we use the number of segments S rather than the number of marks M as our primary id. The number of marks is M = S + 1.

Seg- ment	Length	Perfect Optimal	Sum	Seg- ment	Length	Perfect Optimal	Sum	Seg- ment	Length	Perfect Optimal	Sum	Seg- ment	Length	Perfect Optimal	Sum		
0	0	1	1	11	44	4892	8022	16	91	3392	5632	20	139	X			
1	1	1	1		45	2114			92	1262			140	X			
2	2	1	3		46	684			93	626			141	X			
	3	2			47	238			94	212			142	X			
3	4	3	9		48	68			95	76			143	X			
	5	4			49	22			96	40			144	X			
	6	2			50	4			97	16			145	X			
4	7	12	24	12	51	16318	26264	98	2	146	X		X				
	8	8			52	6350		99	2	147	X						
	9	4			53	2286		100	2	148	X						
5	10	38	88		54	836		17	101	2	149			X			
	11	30			55	330			102	3426	150			X			
	12	14			56	108			103	1506	151			X			
	13	6			57	24			104	682	152			X			
6	14	130	254		13	58			12	105	360	153	X				
	15	80		59		31980	106		138	154	X						
	16	32		60		12252	107		70	155	X						
	17	12		61		4960	108		28	156	X						
7	18	500	1064	62		1806	18		109	8	157	X					
	19	326		63		668			110	2	158	X					
	20	150		64		238			111	2	159	X					
	21	66		65		86			112	2	160	X					
	22	18		66	6	113			6578	161	X						
8	23	4	1644	14	67	12			19	114	2984	162				X	
	24	944			68	4		115		1458	163	X					
	25	460			69	15558		116		586	164	X					
	26	166			70	5906		117		374	165	X					
	27	56			71	2558		118		192	166	X					
	28	12			72	850		119		98	167	X					
9	29	6	3382		15	73		388		22	120	38		168	X		
	30	2036				74		120			121	14		169	X		
	31	890		75		38		122			4	170		X			
	32	304		76		4	123	4			171	X					
	33	120		77		6	124	X			172	X					
	34	20		78		4	125	X			173	X					
	35	10		79		2	126	X			174	X					
10	36	2	4156	80		4972	19	127			X	175	X				
	37	2678		81	2234	128		X	176		X						
	38	974		82	798	129		X	177		X						
	39	362		83	332	130		X	178		X						
	40	100		84	106	131		X	179		X						
	41	36		85	48	132		X	180		X						
	42	4		86	4	133		X	181		X						
				87	6	134		X	182	X							
				88	2	135		X	183	X							
				89	2	136		X									
				90	2	137		2									
									138	2							

