

What is the smallest number that is evenly divisible by all of the numbers from 1-20?

Ex. the smallest number divisible by 1-10 is 2520

1	2	3	4	5	6	7	8	9	10
			↓		↓	—	↓	↓	↓
			2 ²		2·3	2 ³	3 ²	2·5	
						—	—	—	

Multiply the highest power of each prime factor: $2^3 \cdot 3^2 \cdot 5 \cdot 7 = 2520$

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
			↓	—	↓	—	↓	↓	↓	—	↓	—	↓	↓	↓	—	↓	—	↓
			2 ²	2·3	2 ³	3 ²	2·5	3·2 ²			2·7	3·5	2 ⁴		2·3 ²		2 ² ·5		
															—				

$2^4 \cdot 3^2 \cdot 5 \cdot 7 \cdot 11 \cdot 13 \cdot 17 \cdot 19$