

June 2022

1 Answer

$$2520 = 2^3 3^2 5^1 7^1$$

Smallest positive number that is divisible is

$$2^4 3^2 5^1 7^1 11^1 13^1 17^1 19^1 = 232792560$$

This number is obtained by the LCM of all numbers from 1 to 20.

To check if it is evenly divisible, divide each number and check that except 16, division by each number gives an even quotient (since 1 factor of 2 is always present).

To make it divisible by 2 one more factor of 2 has to be included.

$$232792560 \cdot 2 = 465585120$$