



## Prime Factorization - Is Number a Multiple of Both - From Values as Factors

**1**  $675 = 3^3 \cdot 5^2$

Is 675 a multiple of both 135 and 225?

$$135 = 3^3 \cdot 5$$

$$225 = 3^2 \cdot 5^2$$

is 675 a multiple of 135 and 225?

A	B
Yes	No

**2**  $420 = 2^2 \cdot 3 \cdot 5 \cdot 7$

Is 420 a multiple of both 84 and 210?

$$84 = 2^2 \cdot 3 \cdot 7$$

$$210 = 2 \cdot 3 \cdot 5 \cdot 7$$

is 420 a multiple of 84 and 210?

A	B
Yes	No

**3**  $980 = 2^2 \cdot 5 \cdot 7^2$

Is 980 a multiple of both 220 and 490?

$$220 = 2^2 \cdot 5 \cdot 11$$

$$490 = 2 \cdot 5 \cdot 7^2$$

is 980 a multiple of 220 and 490?

A	B
Yes	No

**4**  $3430 = 2 \cdot 5 \cdot 7^3$

Is 3430 a multiple of both 686 and 490?

$$686 = 2 \cdot 7^3$$

$$490 = 2 \cdot 5 \cdot 7^2$$

is 3430 a multiple of 686 and 490?

A	B
Yes	No

**5**  $270 = 2 \cdot 3^3 \cdot 5$

Is 270 a multiple of both 126 and 90?

$$126 = 2 \cdot 3^2 \cdot 7$$

$$90 = 2 \cdot 3^2 \cdot 5$$

is 270 a multiple of 126 and 90?

A	B
Yes	No

**6**  $630 = 2 \cdot 3^2 \cdot 5 \cdot 7$

Is 630 a multiple of both 210 and 315?

$$210 = 2 \cdot 3 \cdot 5 \cdot 7$$

$$315 = 3^2 \cdot 5 \cdot 7$$

is 630 a multiple of 210 and 315?

A	B
Yes	No

**7**  $1250 = 2 \cdot 5^4$

Is 1250 a multiple of both 250 and 625?

$$250 = 2 \cdot 5^3$$

$$625 = 5^4$$

is 1250 a multiple of 250 and 625?

A	B
Yes	No

**8**  $700 = 2^2 \cdot 5^2 \cdot 7$

Is 700 a multiple of both 140 and 350?

$$140 = 2^2 \cdot 5 \cdot 7$$

$$350 = 2 \cdot 5^2 \cdot 7$$

is 700 a multiple of 140 and 350?

A	B
Yes	No