



Prime Factorization - Is Number a Multiple of Both - From Variables as

Factors

1 $y = 2^3 \cdot 3$

Is y a multiple of both 12 and 8?

$$12 = 2^2 \cdot 3$$

$$8 = 2^3$$

is y a multiple of 12 and 8?

A	B
Yes	No

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

Is y a multiple of both 20 and 28?

$$20 = 2^2 \cdot 5$$

$$28 = 2^2 \cdot 7$$

is y a multiple of 20 and 28?

A	B
Yes	No

3 $r = 5 \cdot 7^3$

Is r a multiple of both 70 and 343?

$$70 = 2 \cdot 5 \cdot 7$$

$$343 = 7^3$$

is r a multiple of 70 and 343?

A	B
Yes	No

4 $d = 3 \cdot 5 \cdot 7^2$

Is d a multiple of both 245 and 105?

$$245 = 5 \cdot 7^2$$

$$105 = 3 \cdot 5 \cdot 7$$

is d a multiple of 245 and 105?

A	B
Yes	No

5 $p = 5^3 \cdot 7$

Is p a multiple of both 105 and 175?

$$105 = 3 \cdot 5 \cdot 7$$

$$175 = 5^2 \cdot 7$$

is p a multiple of 105 and 175?

A	B
Yes	No

6 $z = 3^2 \cdot 5^2$

Is z a multiple of both 45 and 75?

$$45 = 3^2 \cdot 5$$

$$75 = 3 \cdot 5^2$$

is z a multiple of 45 and 75?

A	B
Yes	No

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

Is b a multiple of both 45 and 18?

$$45 = 3^2 \cdot 5$$

$$18 = 2 \cdot 3^2$$

is b a multiple of 45 and 18?

A	B
Yes	No

8 $c = 3^2 \cdot 5 \cdot 7$

Is c a multiple of both 30 and 105?

$$30 = 2 \cdot 3 \cdot 5$$

$$105 = 3 \cdot 5 \cdot 7$$

is c a multiple of 30 and 105?

A	B
Yes	No