



Prime Factorization - Is Number a Factor of Both - From Variables as Factors

1 $z = 3 \cdot 7$

Is z a factor of both 42 and 105?

$$42 = 2 \cdot 3 \cdot 7$$

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

is z a factor of 42 and 105?

A	B
Yes	No

2 $r = 2 \cdot 7$

Is r a factor of both 42 and 70?

$$42 = 2 \cdot 3 \cdot 7$$

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

is r a factor of 42 and 70?

A	B
Yes	No

3 $r = 3 \cdot 7$

Is r a factor of both 70 and 154?

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

$$154 = 2 \cdot 7 \cdot 11$$

is r a factor of 70 and 154?

A	B
Yes	No

4 $n = 3 \cdot 7$

Is n a factor of both 42 and 105?

$$42 = 2 \cdot 3 \cdot 7$$

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

is n a factor of 42 and 105?

A	B
Yes	No

5 $z = 2 \cdot 5$

Is z a factor of both 30 and 70?

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

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

is z a factor of 30 and 70?

A	B
Yes	No

6 $x = 2 \cdot 7$

Is x a factor of both 30 and 66?

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

$$66 = 2 \cdot 3 \cdot 11$$

is x a factor of 30 and 66?

A	B
Yes	No

7 $y = 2 \cdot 5$

Is y a factor of both 105 and 165?

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

$$165 = 3 \cdot 5 \cdot 11$$

is y a factor of 105 and 165?

A	B
Yes	No

8 $m = 3^2$

Is m a factor of both 18 and 45?

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

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

is m a factor of 18 and 45?

A	B
Yes	No