



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

1

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

Is r a factor of both 1470 and 3234?

$$1470 = 2 \cdot 3 \cdot 5 \cdot 7^2$$

$$3234 = 2 \cdot 3 \cdot 7^2 \cdot 11$$

is r a factor of 1470 and 3234?

A

Yes

B

No

2

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

Is x a factor of both 420 and 924?

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

$$924 = 2^2 \cdot 3 \cdot 7 \cdot 11$$

is x a factor of 420 and 924?

A

Yes

B

No

3

$$y = 7^4$$

Is y a factor of both 4802 and 7203?

$$4802 = 2 \cdot 7^4$$

$$7203 = 3 \cdot 7^4$$

is y a factor of 4802 and 7203?

A

Yes

B

No

4

$$r = 2^2 \cdot 5^2$$

Is r a factor of both 420 and 1650?

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

$$1650 = 2 \cdot 3 \cdot 5^2 \cdot 11$$

is r a factor of 420 and 1650?

A

Yes

B

No

5

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

Is b a factor of both 588 and 980?

$$588 = 2^2 \cdot 3 \cdot 7^2$$

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

is b a factor of 588 and 980?

A

Yes

B

No

6

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

Is x a factor of both 2310 and 2730?

$$2310 = 2 \cdot 3 \cdot 5 \cdot 7 \cdot 11$$

$$2730 = 2 \cdot 3 \cdot 5 \cdot 7 \cdot 13$$

is x a factor of 2310 and 2730?

A

Yes

B

No

7

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

Is y a factor of both 5390 and 3822?

$$5390 = 2 \cdot 5 \cdot 7^2 \cdot 11$$

$$3822 = 2 \cdot 3 \cdot 7^2 \cdot 13$$

is y a factor of 5390 and 3822?

A

Yes

B

No

8

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

Is p a factor of both 420 and 660?

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

$$660 = 2^2 \cdot 3 \cdot 5 \cdot 11$$

is p a factor of 420 and 660?

A

Yes

B

No