



Prime Factorization - Is Integer a Factor of Both - From Values as Factors

1 $250 = p \cdot r^3$

Is 250 a factor of both
750 and 1750?

$$750 = 2 \cdot 3 \cdot 5^3$$

$$1750 = 2 \cdot 5^3 \cdot 7$$

is 250 a factor of
750 and 1750?

A

Yes

B

No

2

$$210 = d \cdot r \cdot z \cdot p$$

Is 210 a factor of both
6006 and 13090?

$$6006 = 2 \cdot 3 \cdot 7 \cdot 11 \cdot 13$$

$$13090 = 2 \cdot 5 \cdot 7 \cdot 11 \cdot 17$$

is 210 a factor of
6006 and 13090?

A

Yes

B

No

3 $100 = b^2 \cdot c^2$

Is 100 a factor of both
300 and 700?

$$300 = 2^2 \cdot 3 \cdot 5^2$$

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

is 100 a factor of
300 and 700?

A

Yes

B

No

4 $1225 = r^2 \cdot b^2$

Is 1225 a factor of both
2450 and 3675?

$$2450 = 2 \cdot 5^2 \cdot 7^2$$

$$3675 = 3 \cdot 5^2 \cdot 7^2$$

is 1225 a factor of
2450 and 3675?

A

Yes

B

No

5 $525 = r \cdot x^2 \cdot p$

Is 525 a factor of both
1050 and 5775?

$$1050 = 2 \cdot 3 \cdot 5^2 \cdot 7$$

$$5775 = 3 \cdot 5^2 \cdot 7 \cdot 11$$

is 525 a factor of
1050 and 5775?

A

Yes

B

No

6 $60 = m^2 \cdot p \cdot d$

Is 60 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 60 a factor of
420 and 660?

A

Yes

B

No

7 $56 = p^3 \cdot z$

Is 56 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 56 a factor of
420 and 924?

A

Yes

B

No

8

$$315 = c^2 \cdot p \cdot x$$

Is 315 a factor of both
2310 and 1638?

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

$$1638 = 2 \cdot 3^2 \cdot 7 \cdot 13$$

is 315 a factor of
2310 and 1638?

A

Yes

B

No