



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

1

$225 = \bigcirc^2 \cdot \bigcirc^2$

Is 225 a factor of both 1050 and 1650?

$1050 = 2 \cdot 3 \cdot 5^2 \cdot 7$   
 $1650 = 2 \cdot 3 \cdot 5^2 \cdot 11$

A	B
Yes	No

is 225 a factor of 1050 and 1650?

2

$40 = \bigcirc^3 \cdot \bigcirc$

Is 40 a factor of both 120 and 280?

$120 = 2^3 \cdot 3 \cdot 5$   
 $280 = 2^3 \cdot 5 \cdot 7$

A	B
Yes	No

is 40 a factor of 120 and 280?

3

$100 = \bigcirc^2 \cdot \bigcirc^2$

Is 100 a factor of both 300 and 700?

$300 = 2^2 \cdot 3 \cdot 5^2$   
 $700 = 2^2 \cdot 5^2 \cdot 7$

A	B
Yes	No

is 100 a factor of 300 and 700?

4

$126 = \bigcirc \cdot \bigcirc^2 \cdot \bigcirc$

Is 126 a factor of both 3465 and 4095?

$3465 = 3^2 \cdot 5 \cdot 7 \cdot 11$   
 $4095 = 3^2 \cdot 5 \cdot 7 \cdot 13$

A	B
Yes	No

is 126 a factor of 3465 and 4095?

5

$686 = \bigcirc \cdot \bigcirc^3$

Is 686 a factor of both 1470 and 3234?

$1470 = 2 \cdot 3 \cdot 5 \cdot 7^2$   
 $3234 = 2 \cdot 3 \cdot 7^2 \cdot 11$

A	B
Yes	No

is 686 a factor of 1470 and 3234?

6

$150 = \bigcirc \cdot \bigcirc \cdot \bigcirc^2$

Is 150 a factor of both 2310 and 6825?

$2310 = 2 \cdot 3 \cdot 5 \cdot 7 \cdot 11$   
 $6825 = 3 \cdot 5^2 \cdot 7 \cdot 13$

A	B
Yes	No

is 150 a factor of 2310 and 6825?

7

$350 = \bigcirc \cdot \bigcirc^2 \cdot \bigcirc$

Is 350 a factor of both 1050 and 3850?

$1050 = 2 \cdot 3 \cdot 5^2 \cdot 7$   
 $3850 = 2 \cdot 5^2 \cdot 7 \cdot 11$

A	B
Yes	No

is 350 a factor of 1050 and 3850?

8

$735 = \bigcirc \cdot \bigcirc \cdot \bigcirc^2$

Is 735 a factor of both 1470 and 8085?

$1470 = 2 \cdot 3 \cdot 5 \cdot 7^2$   
 $8085 = 3 \cdot 5 \cdot 7^2 \cdot 11$

A	B
Yes	No

is 735 a factor of 1470 and 8085?