



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

1 $98 = 2 \cdot 7^2$

Is 98 a factor of both 210 and 1617?

$210 = 2 \cdot 3 \cdot 5 \cdot 7$
 $1617 = 3 \cdot 7^2 \cdot 11$

is 98 a factor of
210 and 1617?

A	B
Yes	No

2 $45 = 3^2 \cdot 5$

Is 45 a factor of both 90 and 315?

$90 = 2 \cdot 3^2 \cdot 5$
 $315 = 3^2 \cdot 5 \cdot 7$

is 45 a factor of
90 and 315?

A	B
Yes	No

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

Is 105 a factor of both 462 and 910?

$462 = 2 \cdot 3 \cdot 7 \cdot 11$
 $910 = 2 \cdot 5 \cdot 7 \cdot 13$

is 105 a factor of
462 and 910?

A	B
Yes	No

4 $12 = 2^2 \cdot 3$

Is 12 a factor of both 60 and 84?

$60 = 2^2 \cdot 3 \cdot 5$
 $84 = 2^2 \cdot 3 \cdot 7$

is 12 a factor of
60 and 84?

A	B
Yes	No

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

Is 30 a factor of both 210 and 330?

$210 = 2 \cdot 3 \cdot 5 \cdot 7$
 $330 = 2 \cdot 3 \cdot 5 \cdot 11$

is 30 a factor of
210 and 330?

A	B
Yes	No

6 $28 = 2^2 \cdot 7$

Is 28 a factor of both 210 and 132?

$210 = 2 \cdot 3 \cdot 5 \cdot 7$
 $132 = 2^2 \cdot 3 \cdot 11$

is 28 a factor of
210 and 132?

A	B
Yes	No

7 $30 = 2 \cdot 3 \cdot 5$

Is 30 a factor of both 462 and 546?

$462 = 2 \cdot 3 \cdot 7 \cdot 11$
 $546 = 2 \cdot 3 \cdot 7 \cdot 13$

is 30 a factor of
462 and 546?

A	B
Yes	No

8 $28 = 2^2 \cdot 7$

Is 28 a factor of both 84 and 140?

$84 = 2^2 \cdot 3 \cdot 7$
 $140 = 2^2 \cdot 5 \cdot 7$

is 28 a factor of
84 and 140?

A	B
Yes	No