Factors

Date: _____

Sit down with a pen and paper.

Factors: 3 and 2 are factors of 6   3 x 2 = 6

4 and 5 are factors of 20   4 x 5 = 20

A number that can be multiplied into another number.

Factor pair: Factors come in pairs.

Example: Find all the factors of 24

Factors of 24 are

Factor pair: Factors come in pairs.

Example: Find all the factors of 24

$$1 \times 24$$

$$2 \times 12$$

$$3 \times 8$$

$$4 \times 6$$

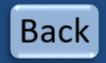Factors of 24 are   1,2,3,4,6,8,12,24

1. Find all the factors of 36.

2. Find all the factors of 100.

3. Is 40 a factor of 8?

4. What is the smallest factor of 1244?

5. What is the biggest factor of 658?

6. Find all the factors of $3x^2y$

1 | Find all the factors of 36. | 1, 2, 3, 4, 6, 9, 12, 18, 36

2 | Find all the factors of 100. | 1, 2, 4, 5, 10, 20, 25, 100

3 | Is 40 a factor of 8? | No, 8 is a factor of 40

4 | What is the smallest factor of 1244? | 1

5 | What is the biggest factor of 658? | 658

6 | Find all the factors of $3x^2y$ | $3, x, y$

Factors of numbers

or

Factors and algebra

1 What numbers between 20 and 30 have a factor of 7?

2 299 has a factor of 13. What is the next number after 299 to have a factor of 13?

3 What factors do 70 and 28 have in common?

4 A factor pair of 24 add to make 10. What are the two factors?

5 The number 13 has two factors. 1 and 13.

What numbers below 20 have exactly two factors?

1 What numbers between 20 and 30 have a factor of 7?

21 and 28

2 299 has a factor of 13. What is the next number after 299 to have a factor of 13?   312

3 What factors do 70 and 28 have in common?   1, 7, 14

4 A factor pair of 24 add to make 10. What are the two factors?

4 and 6

2, 3, 5, 7, 11, 13, 17, 19

5 The number 13 has two factors. 1 and 13.

What numbers below 20 have exactly two factors?

1   What are the factors of $6a^2bc$?

2   After 28, the next perfect number is $2^4(2^5 - 1)$, What is the number? *No calculator.*

3   Factors come in 2's. That's why they are call factor pairs. Do all numbers have an even number of factors?

4   Are there any values of x where $x + 1$ will be a factor of $2x$?

5   Can you explain why this is the only solution above?

1 What are the factors of $6a^2bc$?   2, 3, a, b, c

2 After 28, the next perfect number is $2^4(2^5 - 1)$, What is the number? *No calculator.*   496

3 Factors come in 2's. That's why they are call factor pairs. Do all numbers have an even number of factors?   No

4 Are there any values of x where $x + 1$ will be a factor of $2x$?   When $x = 1$

5 Can you explain why this is the only solution above?

x is half of $2x$
$x+1$ is greater than half the number.
There are no factors greater than half the number except the number itself

Well done for completing the lesson.

Reflections