

# Factors and Prime and Composite Numbers

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The diagram features the equation  $2 \times 5 = 10$  in the center. Above the equation, a downward-pointing arrow contains the word "factor". Below the equation, an upward-pointing arrow also contains the word "factor". To the right of the equation, a leftward-pointing arrow contains the word "product". The background is white with blue decorative splatters and curved lines.

$$2 \times 5 = 10$$

**Factors of a  
Number**



Every number has factors.

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- Lets's look at 12
- What numbers can be multiplied to make 12?

# Finding Factors



- What are the factors of 6?
- What are the factors of 8?
- What are the factors of 18?

# Factors of 24 using the Rainbow method

Start at the lowest possible factor (1) and find partners!

1

2

3

4


24



# Factors of 24

Start at the lowest possible factor (1) and find partners!





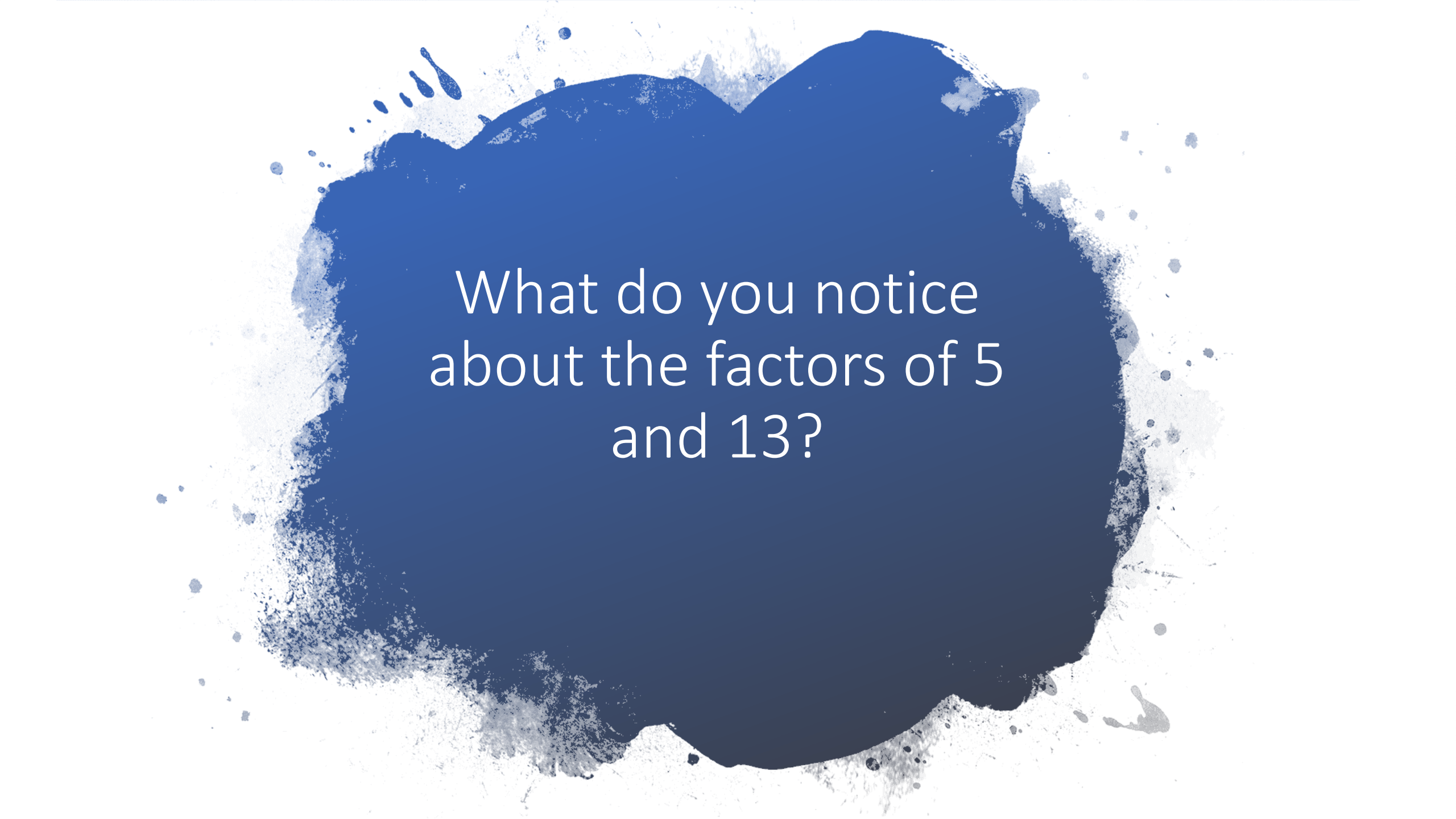
Find the factors of 30  
using the rainbow  
method

# Prime and Composite

What are the factors of 5?

What are the factors of 13?





What do you notice  
about the factors of 5  
and 13?

# Prime Numbers



- These numbers are called **PRIME** numbers.
- A **PRIME** number is any number that has only **TWO** factors -----  $1 \times$  itself.
- $5 = 1 \times 5$
- $13 = 1 \times 13$
- Can you think of other prime numbers?

# Common Factors



What about the factors for 12 and 18?



What factors do 12 and 18 have *in common*?



Which of these common factors is the *greatest*?



Mathematicians call this the GCF - Greatest Common Factor. It's a good thing to know!

Find the *GCF* for 20 and 35.

1. Find the factors of 20.

STEP 1

2. Find the factors of 35.

STEP 2

3. Find the *common* factors.

STEP 3

4. Which one is the *GCF*?

STEP 4