THIRD SPACE LEARNING

$3 \times 2 = 6$

HELLO!

Today we are going to do revision on multiplication and division

(Square, cube and prime numbers, multiples and factors)

THIRD SPACE LEARNING

Arithmetic Warm Up
Fractions

1. $\frac{6}{7} - \frac{2}{7} = \frac{4}{\square}$

2. $\frac{3}{4}$ of $24 = \square$

3. $\frac{3}{4} + \frac{2}{12} = \frac{\square}{\square}$

4. $3 \times 1\frac{2}{3} =$

THIRD SPACE LEARNING

Revision on multiplication and division

Today we are going to revise how to:

- recognise and use both square and cube numbers
- find common multiples and factors

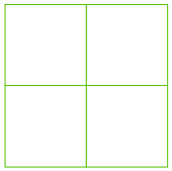
Square numbers

$3^2 = 3 \times 3 = 9$

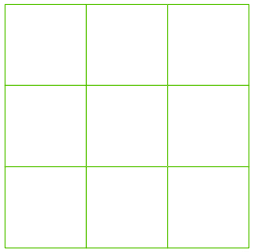
Multiplied together 2 times

3 squared **or** *3 to the power of 2*

$1 = 1 \times 1$



$4 = 2 \times 2$



$9 = 3 \times 3$

Can you count up in square numbers from 1 x 1 = 1 up to 12 x 12 = 144

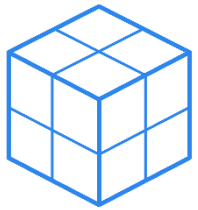
Cube numbers

$2^3 = 2 \times 2 \times 2 = 8$

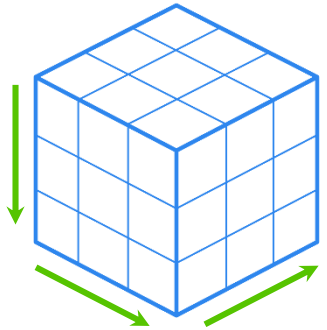
Multiplied together 3 times

2 cubed **or** *2 to the power of 3*

$1 \times (1 \times 1) = 1$



$2 \times (2 \times 2) = 2 \times 4 = 8$



$3 \times (3 \times 3) = 3 \times 9 = 27$

What is $4^2 - 2^3$

THIRD SPACE LEARNING

Question 1

Complete

What do you notice?

What do you know?

36 and 64 are both square numbers.

They have a sum of 100

Find two **square** numbers that have a sum of **130**

[ ] and [ ]

Can you show your working out?

How could you extend the question?

THIRD SPACE LEARNING

Finding common factors and multiples

Multiple: a number multiplied by a given number

- ✓ **21 is a multiple of 7 because 7 x 3 = 21**

Common Multiple: a multiple for different numbers

- ✓ **12 = 6 x 2 = 3 x 4**
- ✓ **So 12 is a common multiple of 2,3,4,and 6**

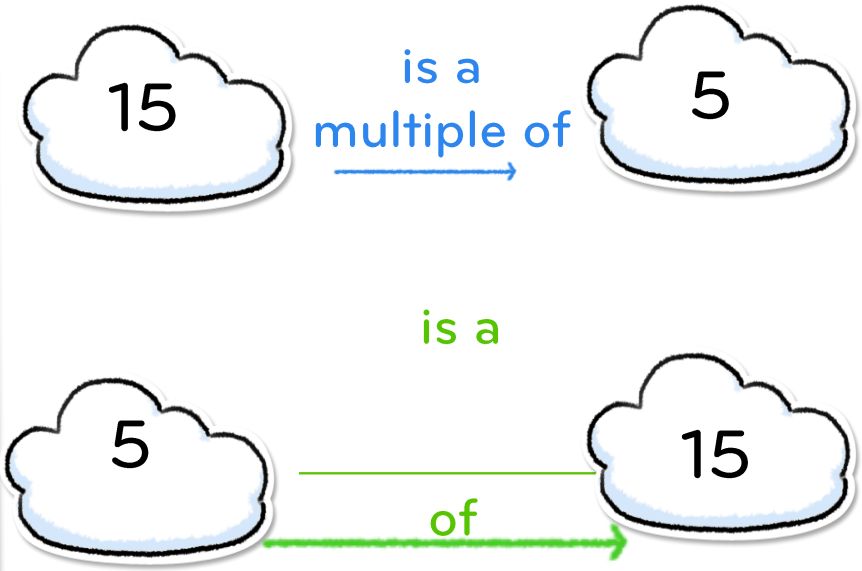
Factor: a number that divides into a given number without a remainder

- ✓ **5 and 2 are factors of 10**

Common factor: a factor for different numbers

- ✓ **6 = 2 x 3 and 14 = 2 x 7**
- ✓ **So 2 is a common factor of 6 and 14**

Complete:



Write all the numbers between 50 and 100 that are factors of 180.

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Question 2

Complete

What do you notice?

What do you know?

Here is a diagram for sorting numbers.

Write **one number** in each box.

One is done for you.

	multiple of 5	**not** a multiple of 5
multiple of 3	30	
not a multiple of 3		

Can you show your working out?

How could you extend the question?

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Question 3

Complete

What do you notice?

What do you know?

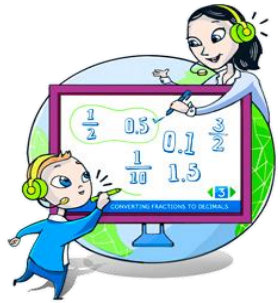
List all the factors of 48 that are also factors of 56.

Can you show your working out?

How could you extend the question?

THIRD SPACE LEARNING

Let's review:



- I can solve problems involving square and cube numbers
- I can solve problems involving factors and multiples

Draw a circle around the smiley face to show how you feel about what we've just been doing.

Is there something you would like to go over before we move on?

THIRD SPACE LEARNING

Revision on multiplication and division

Now we are going to revise how to:

- identify and recognise prime numbers and prime factors
- divide and multiply by 10, 100, 1 000

Prime numbers and prime factors

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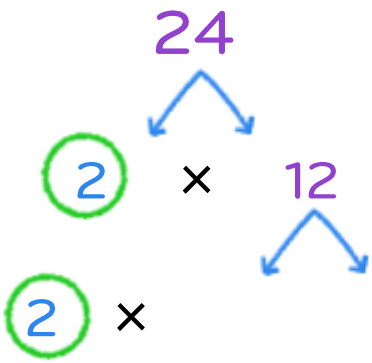
Complete the definition.

A prime number is a number that has exactly ☐ factors.

These two factors are always ☐ and ☐

Write 24 as a product of its prime numbers by decomposition



The prime factors of 24 are:

_____, _____, _____, _____

This can also be written as:

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Question 4

Complete

What do you notice?

What do you know?

Write 32 as a product of its prime factors.

Can you show your working out?

How could you extend the question?

Circle the **two** prime numbers.

29 39 49 59 69

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Multiplying and dividing by 10, 100, 1000

100 has ☐ zeroes.

When multiplying by 100, the digits move ☐ places to the ☐

When you divide by 100, the digits move ☐ places to the ☐

1. 459 ÷ 1000 = ☐

2. 459 x 100 = ☐

3. 4.59 ÷ 10 = ☐

4. 4.59 x 1000 = ☐

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Question 5

Complete

What do you notice?

What do you know?

A Sophie is thinking of a number.
She multiplies by 1 000 and then divides by 10.
The answer is 578.
What was the number Sophie thought of?

Can you show your working out?

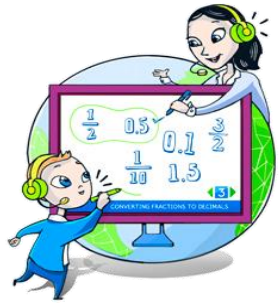
B ☐ x 10 = 64 000 ÷ 200

How could you extend the question?

C $\frac{1}{10}$ of 1.36 = ☐

THIRD SPACE LEARNING

Let's review:



- I can identify and recognise prime numbers and prime factors
- I can divide and multiply by 10, 100, 1 000

Draw a circle around the smiley face to show how you feel about what we've just been doing.

Is there something you would like to go over before we move on?