

Exploring
Numbers

With Miss Maths

Today's online lesson will look at:

- ▶ Prime Numbers
- ▶ A Prime Number Investigation



Let's get talking...

- ▶ What is a prime number?
- ▶ What is a composite number?

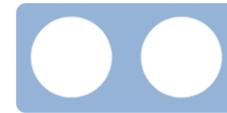
Prime numbers

A Prime number is a special number that can only be divided by itself and 1.

A prime number has 2 factors
(factors=numbers that 'fit into' other numbers)

2 is the only even prime number

7 is a prime number



Can you think of some prime numbers?

Remember a prime number should only have 2 factors.

2 is a prime number (factors are 1 and 2)

5 is a prime number (factors are 1 and 5)

29 is a prime number (factors are 1 and 29)

A composite number

▶ A composite number is a number with more than 2 factors.

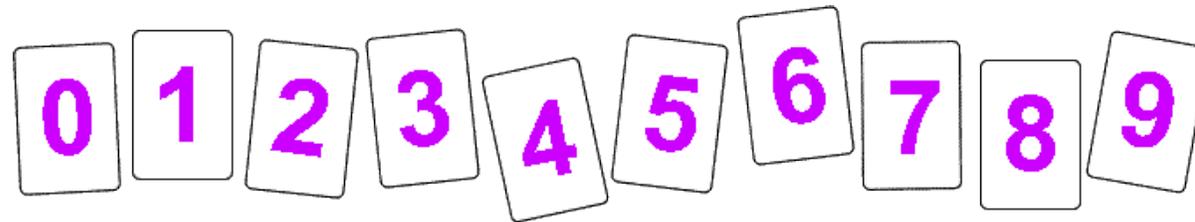
▶ 6 is a composite number because 1, 2, 3, and 6 'fit into' 6
It has 4 factors.

						$6 = 6 \times 1$
						$6 = 3 \times 2$
						$6 = 2 \times 3$
						$6 = 1 \times 6$

Our Nrich investigation is called Penta primes



Remember our Pentominoes challenge? What does Pente mean in Greek?



Here are ten cards numbered 0 to 9:

Using all ten cards, rearrange them to make five prime numbers.

Can you find a way of doing it with five two-digit numbers?

How about using one one-digit number, one three-digit number and three two-digit numbers? ...

Before we begin let's look at the skills you will develop:

- ▶ Independent thinking

Q What do I have to do?

Q How do I go about this? How can I organise this?



- ▶ Which maths facts do I need to know?

- ▶ Which arithmetic skills might I need to use?

- ▶ Exploring numbers ('playing around with them')

- ▶ Making observations, spotting timestable patterns

- ~~▶ Making a rule and proving it~~ Finding all possibilities

- ▶ Creative thinking

- ▶ Resilience

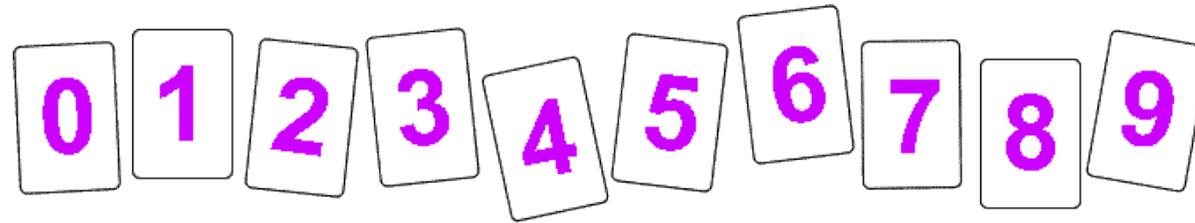
- ▶ Communicating ideas



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Extension:

▶ Who can find a solution that has the highest sum when all five numbers are added together?



▶ We will work through this problem in our online lesson at 11am