

Monday 25th January

LO: The Nine Times Tables

1. Write out your nine times tables.

$$1 \times 9 = 9$$

$$2 \times 9 = 18$$

$$3 \times 9 = 27$$

$$4 \times 9 = 36$$

$$5 \times 9 = 45$$

$$6 \times 9 = 54$$

$$7 \times 9 = 63$$

$$8 \times 9 = 72$$

$$9 \times 9 = 81$$

$$10 \times 9 = 90$$

$$11 \times 9 = 99$$

$$12 \times 9 = 108$$

2. What patterns can you see with the numbers? What do you notice about the digits?

The ones go down in numbers but the tens go up in numbers.

3. Try the Finger Trick-can you see how it works? Yes I can

Investigate:

Is it ALWAYS, SOMETIMES or NEVER true that:

If you add the digits in every multiple of 9, they will ALWAYS add up to 9?

For example: $1 + 8 = 9$, $2 + 7 = 9$

$$3 + 6 = 9$$

$$4 + 5 = 9$$

$$5 + 4 = 9$$

$$6 + 3 = 9$$

$$7 + 2 = 9$$

$$8 + 1 = 9$$

So it is always true.

Challenge:

Think of a 2-digit number. Swap the digits around and then find the difference.

For example:

I chose 42, then I swap the digits and I get 24.

$$42 - 24 = 18$$

18 is a multiple of 9 AND the digits sum to make 9! ($1 + 8 = 9$)

If you do this with ANY 2-digit number, will you always get a multiple of 9?

Yes I have done lots of examples below.

$$63 - 36 = 27$$

27 is a multiple of 9 and the digits add up to 9

$$72 - 27 = 45$$

45 is a multiple of 9 and the digits add up to 9

$$10 - 01 = 9$$

9 is a multiple of 9 and the digits add up to 9.

$$86 - 68 = 18$$

18 is a multiple of 9 and digits add up to 9.