# Daily 3 (problem solving and reasoning)

Here there are enough questions for you to do 3 a day. These questions are a chance for you to really show your brain, look for clues like a maths detective. Show your working out, explain how you know.
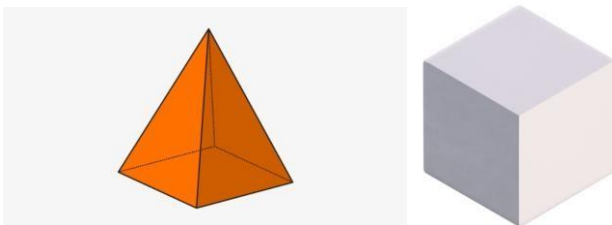
<u>Session 1</u>

1. What different number sentences can you write for this array (picture)? *(addition, subtraction, multiplication, division, fractions)*

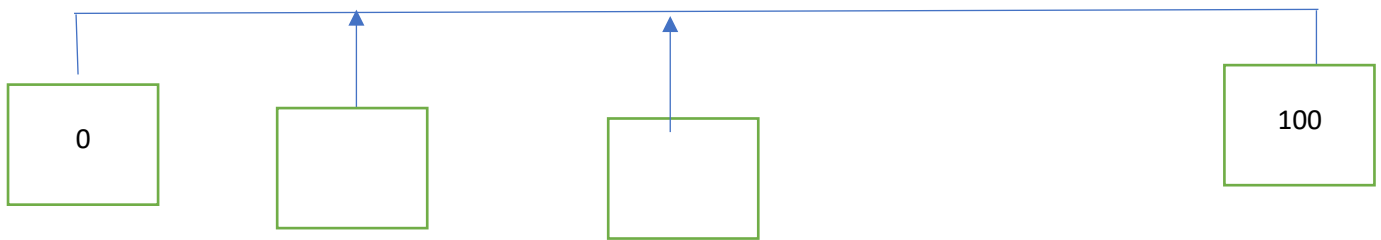   e.g. 5 + 5 + 10 = 20   ,   20 ÷ 2 = 10
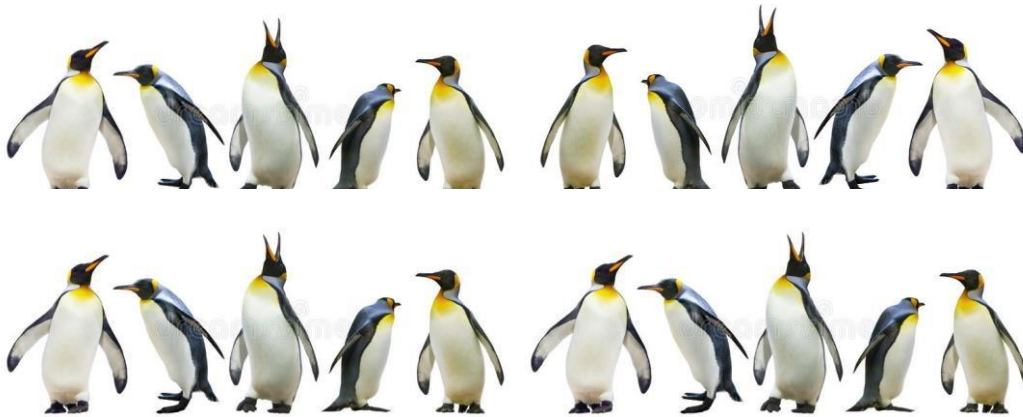
2. Susan has 100 toy cars altogether, 43 of the cars are red, 17 cars are blue, how many are green?

3. What are the similarities and differences between a cube and a square based pyramid? (vertices, edges, faces, 2d shape)
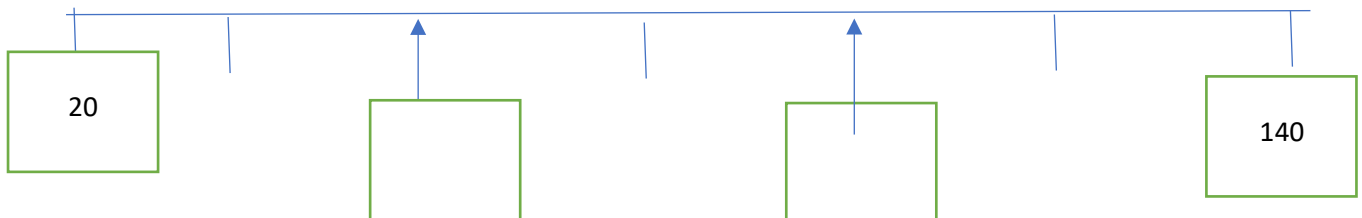

<u>Session 2</u>

1. What numbers are missing on this number line? (TOP TIP: A ruler will not help you, use the numbers at each end)

0			100

Can you explain or show how you worked it out?

2. What are the missing numbers? (Top tip: think about the times tables you already know. Maybe write them down as this might help you!)

20			140

Can you explain or show how you worked it out?

3. Can you draw your own missing numbers on a numberline problem for someone to solve? Think about what numbers they would already need to know to work out what is missing.

Session 3

Circle the odd one out and explain why you have chosen this number as the odd one out. TOP TIP: Think about odd and even numbers, is it in same times tables as the other numbers, use your place value (tens and ones)

3   25   30

_____

_____

Now choose a different number that could be the odd one out and explain.

3   25   30

_____

_____

Now choose a different number that could be the odd one out and explain.

3   25   30

_____

_____

2. Suki was having a party! She was a bit worried because she had 100 biscuits to decorate. Luckily 4 friends came to help her. How many biscuits do they each need to decorate to get the job done?

4. What different number sentences can you write for this array (picture)? *(addition, subtraction, multiplication, division, fractions)*
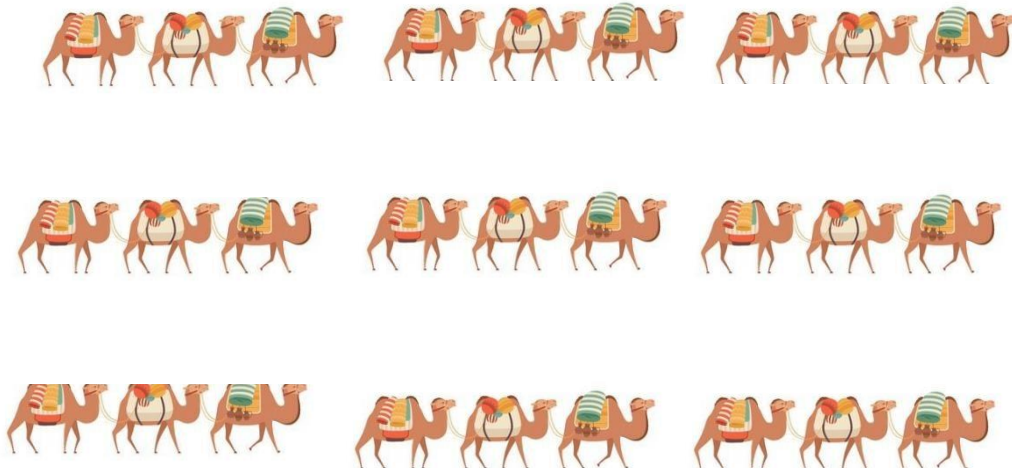
Before you start this session, you my wish to find all of the sterling coins (or draw them) to remind you of which coins we use.

1. I have a total of 25p. Here are 3 different ways my 25p could have been added up. Which of these is not correct? Explain how you know.

20p + 2P + 1p + 1p = 25p

10P + 10p + 3p + 2p = 25p

5p + 5p + 5p + 10p = 25p

_____

_____

2. How many different ways can you make £1.00 (100p)? Remember you can only use coins that exist.

3. Javi had 50p to spend at the shop. What could he have bought?

apple	10p
lollypop	3p
Pocket toy	40p
Freddo	40p
yoyo	35p
Cola bottles	5p
Strawberry pencil	2p
dice	6p

How could Javi have paid for his items? What coins could he have used?

<u>Session 5- Investigation Day</u> 😊

You can choose between these two investigations or maybe do both! Remember to use any resources you can find around your house, draw pictures to help you or to explain your brain. If you can show your thinking, it's much easier to spot a mistake if you make one. Remember, making mistakes is the most important part as it teaches you what to do next time and it makes your brain grow!

Two dice investigation
https://nrich.maths.org/150/note

One of Thirty Six investigation
https://nrich.maths.org/5951/note