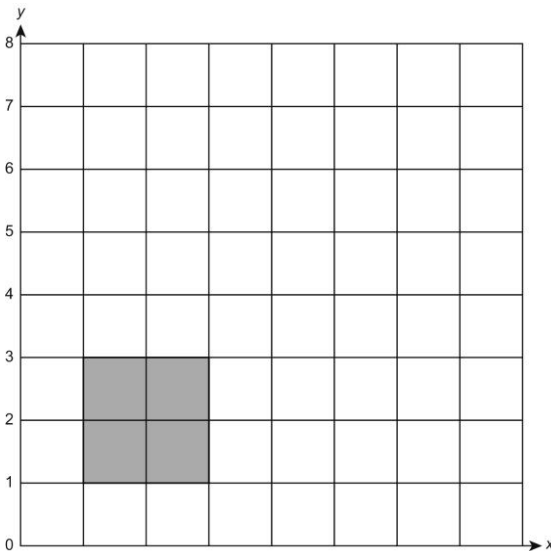


Position and direction

HERE'S THE MATHS

Coordinates are a pair of numbers that give the exact position of the intersection (the point where lines cross) of two lines in a grid of squares. The mnemonic 'along the corridor and up the stairs' helps remember the correct order of coordinates. When a 2-D shape is moved, the coordinate of each point moves by the same number to the left/right and up/down. This is called translation.

ACTIVITY



You will need:

- 1–6 dice
- pencil, paper and rubber

What to do

- Roll the dice twice to give a set of coordinates.
- Work out the translation needed to move the square so that the centre of the square is on that coordinate.
- Repeat with new dice rolls, and continue for 10 minutes.

QUESTIONS TO ASK

Why are coordinates useful?

How can you remember the correct order to read and write coordinates?

What are the new coordinates of (2, 3) when it is moved two units to the right?



Year 4 Maths Newsletter 2



Date: _____

Name: _____

MATHS TOPICS

These are the maths topics your child will be working on during the next three weeks:

- Multiplication and division
- Fractions
- Position and direction

KEY MATHEMATICAL IDEAS

During these three weeks your child will be learning to:

- use known facts and the 'key facts' to work out multiplication facts for the 9 and 6 times tables
- to find a non-unit fraction of a quantity by dividing by the denominator and multiplying by the numerator
- plot points of 2-D shapes on a grid, using coordinates, and find the new coordinates when a shape is moved (translated).

TIPS FOR GOOD HOMEWORK HABITS

Help your child to read any instructions and discuss the homework before they start, ensuring that they fully understand the task.

Multiplication and division

HERE'S THE MATHS

This week's focus is on the 6 times and 9 times tables. Because numbers can be multiplied in any order, your child has already learnt almost all these multiplication facts from previous multiplication tables. Another strategy is to use the key facts for each table 1 times, 2 times, 5 times and 10 times, and deduce missing ones, e.g. $10 \times 6 = 60$, therefore $9 \times 6 = 60$ minus $6 = 54$. The 9 times table also has many number patterns to aid recall.

ACTIVITY

What to do

- Shuffle the cards and start the timer to count down a minute.
- Turn over the cards one by one and ask your child to multiply each card by 6.
- If the answer is correct give your child the card, if incorrect put it to the bottom of the pack.
- Stop when the timer completes a minute and count the number of correct cards.
- Swap roles.
- Play for 10 minutes, trying to improve the number of cards collected.

You will need:

- set of 1–12 cards (use playing cards with Jack representing 11 and Queen 12)
- timer (or phone with timer)

Variation

- Play the same game using the 9 times multiplication table.

QUESTIONS TO ASK

What numbers are multiples of both 6 and 9?

What is 6×7 ? Explain how you worked out the answer.

Tell me about some patterns in the 9 times table.

What is 6×4 ? Can you make up a word problem for this?

Starting at 3, count in sixes to 63. (Use different starting numbers. Count backwards).

Fractions

HERE'S THE MATHS

Your child is learning how to find a non-unit fraction by dividing by the denominator and multiplying by the numerator, e.g. to find $\frac{3}{4}$ of 28, divide by 4 to find a quarter, which is 7. Then multiply 7 by 3 to find $\frac{3}{4}$. Your child is also developing their understanding of equivalent fractions, for example $\frac{2}{4} = \frac{1}{2}$.

ACTIVITY

1 Eighths of 40	2 Tenths of 80	3 Eighths of 80
4 Tenths of 100	5 Eighths of 64	6 Tenths of 50

You will need:

- 1–6 dice
- pencil and paper

What to do

- Take turns to roll the dice and use the table above to determine the denominator and the amount.
- Roll the dice again to determine the numerator and the result of the calculation is the score.
- For example, first dice rolled is 5, second dice rolled is 3. Find $\frac{3}{8}$ of 64, which is 24 and becomes the score.
- Play for 5 minutes.
- The winner has the higher score.

Variations

- First player to reach 100 is the winner.
- Make the grid easier (use halves and quarters).

QUESTIONS TO ASK

Explain how to find $\frac{3}{5}$ of £20.

What is $\frac{3}{4}$ of 100?

Add $\frac{1}{8} + \frac{5}{8}$

What is $\frac{7}{10} - \frac{3}{10}$?

How many tenths must be added to $\frac{3}{10}$ to make one whole?