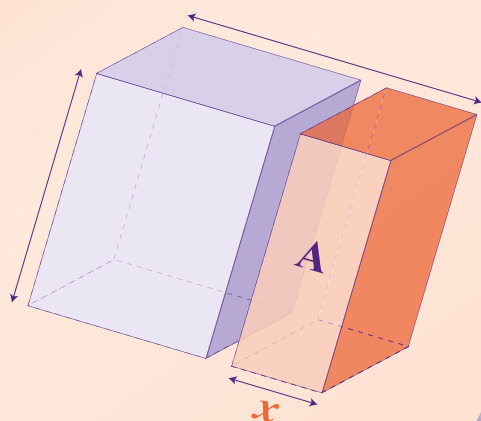


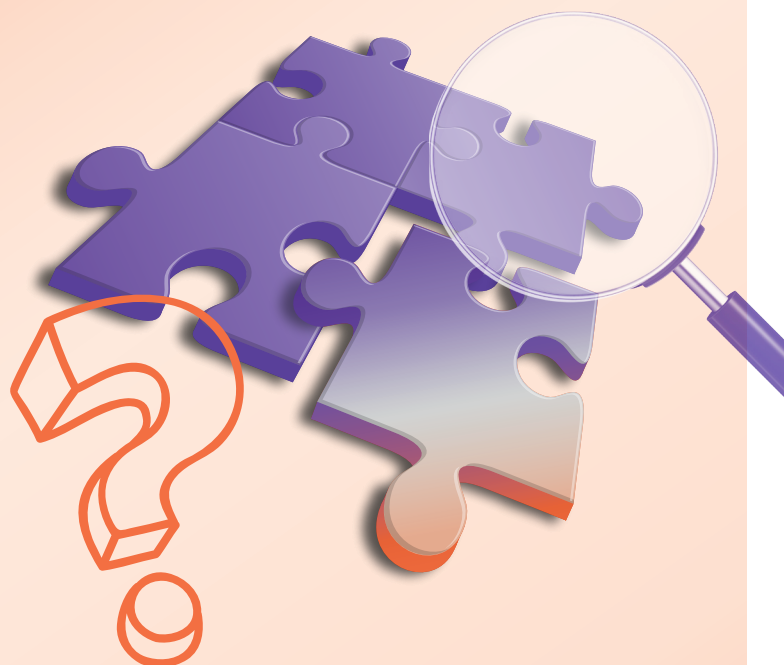
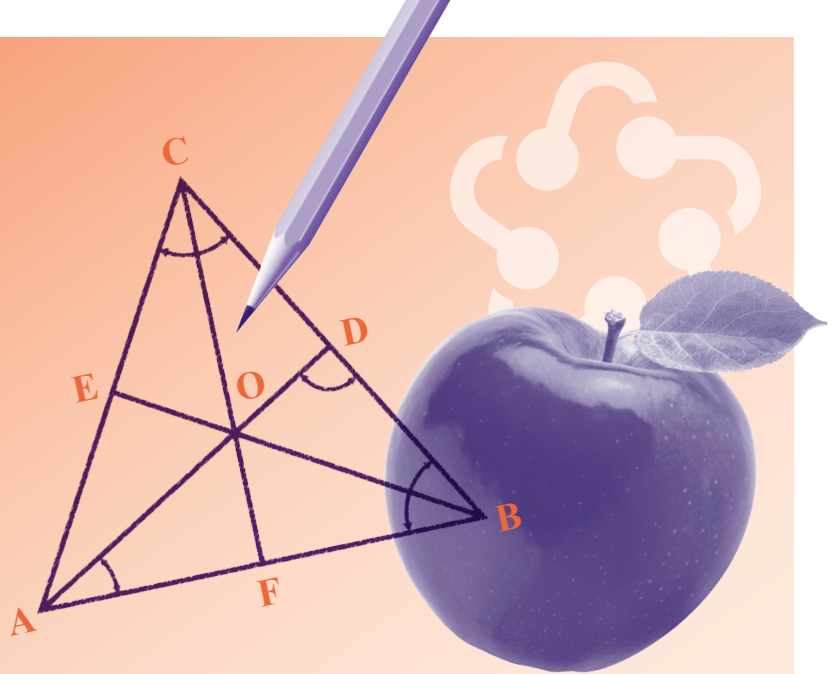
# GCSE Maths Focus on:

## Problem solving

Build on your students' assessment performance using our self-guided, modular training pack



Handouts  
booklet





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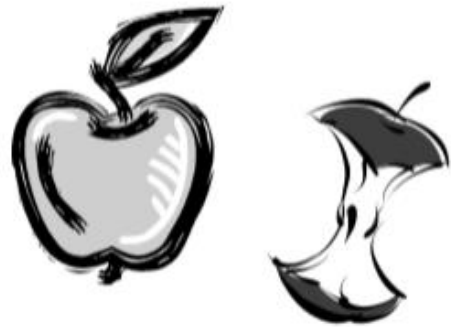
# Using the strategies

## Activity 3

### Problem 1: Apples

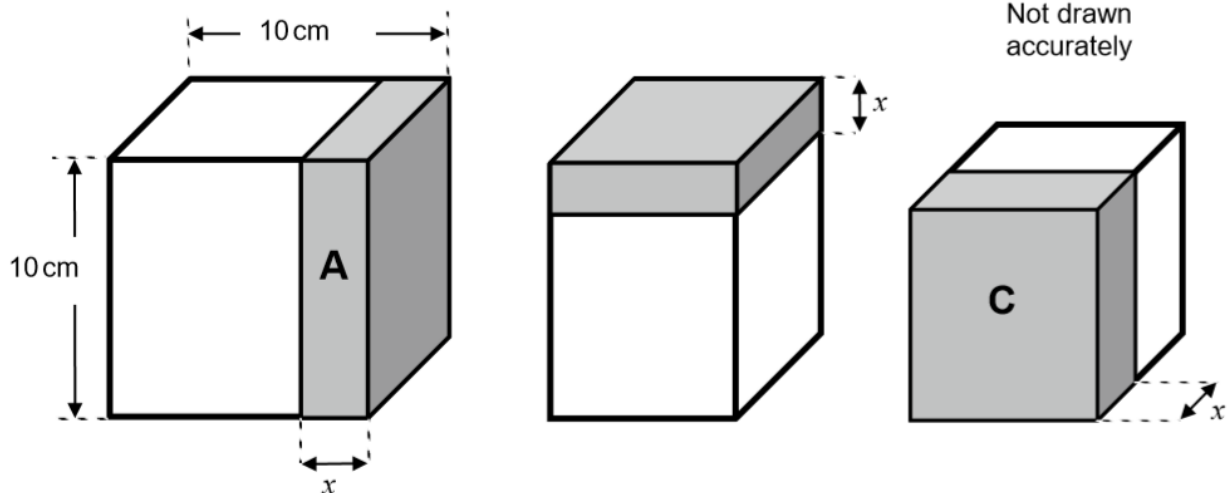
Lottie has a bag of apples.  
She gives half of them to Fred.  
Fred eats two and then has four left.

How many apples did Lottie have at the start?



### Problem 2: Box clever

A cube has edges of 10 cm each.  
Three slices each of thickness  $x$  cm, are cut off the cube.



Slice A is cut off the side, slice B is cut off the top and slice C is cut off the front.

What is the volume of each slice in terms of  $x$  ?

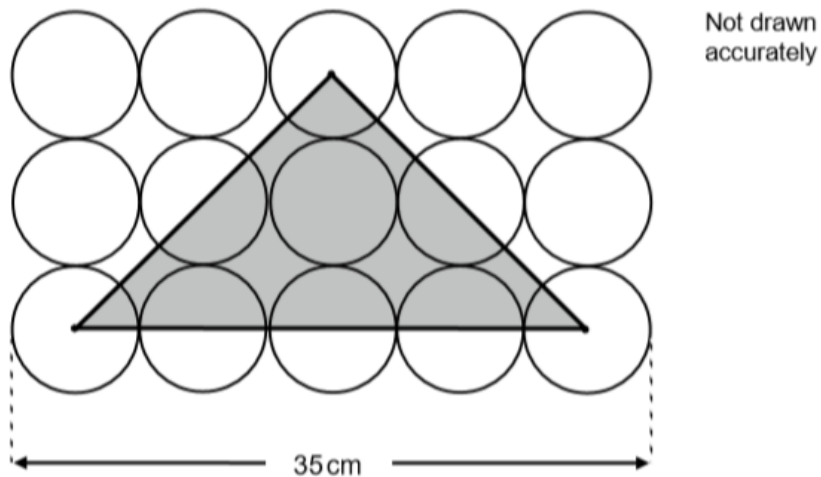
Slice A .....

Slice B .....

Slice C .....

### Problem 3: Bubble

The diagram shows 15 identical circles, arranged as a rectangle and shaded triangle.  
The vertices of the triangle are at the centres of circles.



Calculate the area of the shaded triangle.

Answer .....  $\text{cm}^2$

### Problem 4: Dice

Three dice are numbered 1 to 6.  
Two of them are red and one is purple.  
All three dice are rolled.



What is the probability that the total on the two red dice will be equal to the score on the purple dice?

### Problem 5: Double Trouble

Use all the digits

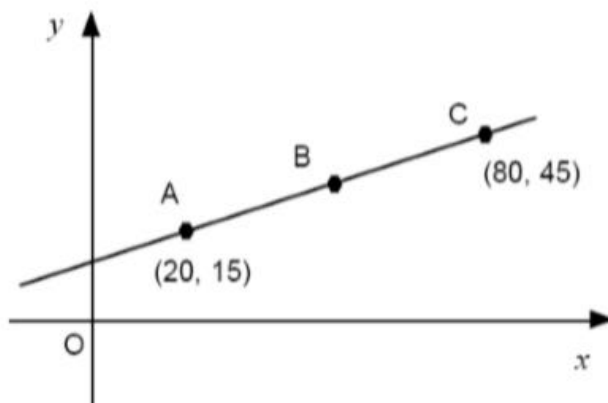
0 1 5 0 1 5 0

To complete this multiplication

$$\begin{array}{|c|c|c|} \hline & & \\ \hline \end{array} \times 2 = \begin{array}{|c|c|c|c|} \hline & & & \\ \hline \end{array}$$

### Problem 6: Equal Points

The three points, A, B and C on this graph are equally spaced

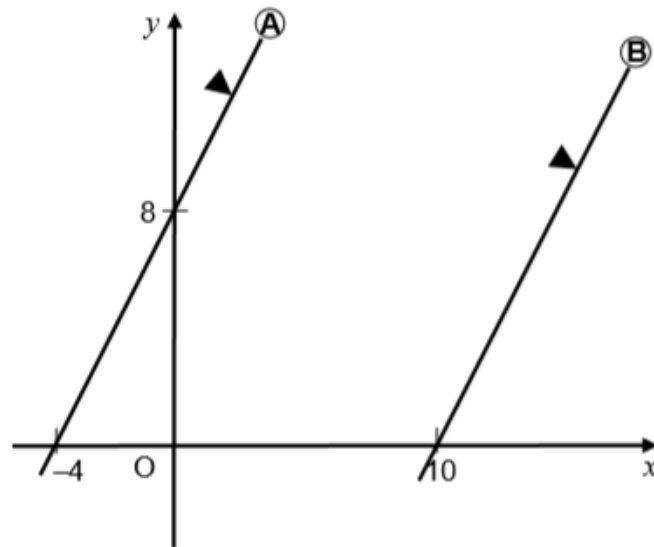


What are the coordinates of point B?

Answer (.....)(.....)

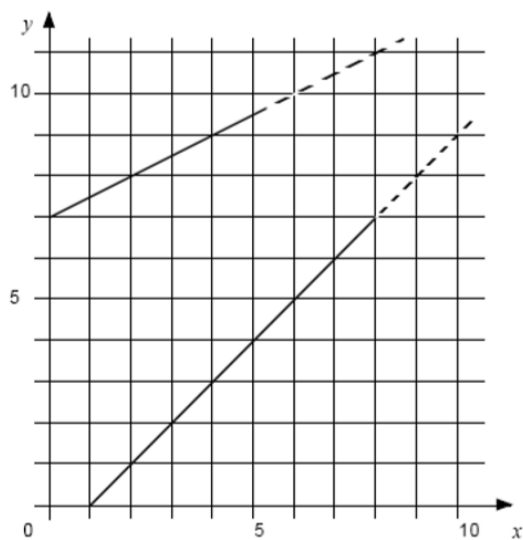
## Problem 7: Javelin B

The lines A and B are parallel



What is the equation of line B?

## Problem 8: Meet



Find the coordinates of the point where these two lines meet if they are extended.

(.....)(.....)

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## Problem 9: Repeater

556, 484 and 33 are examples of numbers with repeated digits.

How many of the whole numbers from 1 to 201 have repeated digits?

Answer .....

## Problem 10: Spinner

Spinner A has 6 equal sections and Spinner B has 8 equal sections

Each section of the spinners contains the number 1, 2 or 3

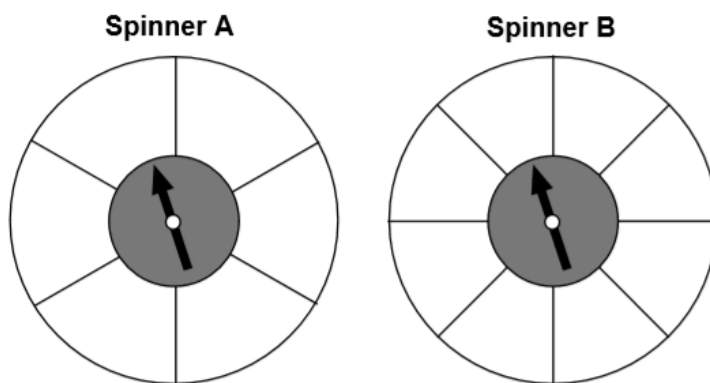
All three numbers appear on each spinner.

Write numbers in the spinner sections so that:

A score of 1 is more likely on Spinner A than Spinner B,

A score of 2 is more likely on Spinner B than Spinner A,

A score of 3 is equally likely on either spinner





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## Notes

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