

Year 8 higher passport to success - due

Question 1 - (2 marks available)

Use pen and paper to work out the answer to $15.84 + 156$

Question 2 - (2 marks available)

Use pen and paper to work out the answer to $13.834 - 7.256$

Question 3 - (3 marks available)

- a) List the first five multiples of 6.

- b) List the first five multiples of 9.

- c) What is the Lowest Common Multiple of 6 and 9?

Question 4 - (4 marks available)

- a) List all the factors of 16.

- b) List all the factors of 40.

- c) What is the Highest Common Factor of 16 and 40?

Question 5 - (3 marks available)

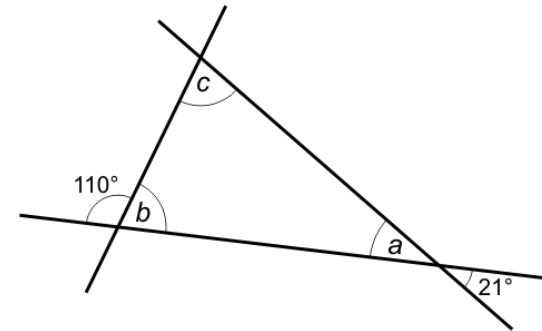
Here is some information about some temperatures in Great Britain in January.

	Maximum Temp ($^{\circ}\text{C}$)	Minimum Temp ($^{\circ}\text{C}$)
Glasgow	2	-8
Cardiff	6	-1
Exeter	8	0

- Which city is warmest in January?
- How much colder is the minimum temperature in Glasgow than the minimum temperature in Cardiff? $^{\circ}\text{C}$
- Which city has the biggest difference between the maximum and minimum temperatures?

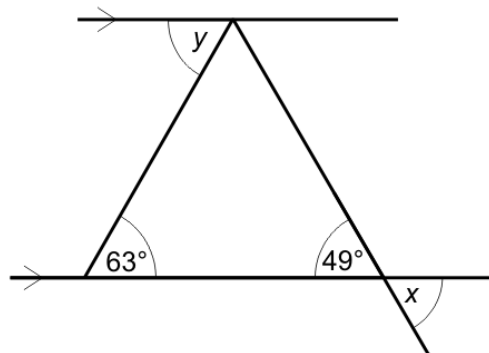
Question 6 - (3 marks available)

The diagram shows three straight lines.



Work out the sizes of angles a , b and c .

Question 7 - (2 marks available)



- Write down the value of angle x .
- Write down the value of angle y .

Question 8 - (3 marks available)

Work out the size of **one** interior angle of a regular 10-sided shape (decagon).

Question 9 - (1 marks available)

Round the number 42.763 to 1 decimal place.

Question 10 - (3 marks available)

Round the following numbers to 1 significant figure:

a) 67

b) £382

c) 76 m

Question 11 - (2 marks available)

The length of a piece of string is 9 cm, rounded to the nearest cm.

a) What is the lower bound of the length of the piece of string?

b) What is the upper bound of the length of the piece of string?

Question 12 - (1 marks available)

Expand $5(2x - 1)$

Question 13 - (3 marks available)

Expand and simplify $3(2x + 1) + 2(x + 4)$

Question 14 - (2 marks available)

Expand and simplify

$$(x + 3)(x + 5)$$

Question 15 - (3 marks available)

If $x = 6$, find the value of

- a) $x + 4$
- b) $3x$
- c) $\frac{x}{2}$

Question 16 - (2 marks available)

Find the n th term of this number sequence

7, 10, 13, 16, ...

Question 17 - (4 marks available)

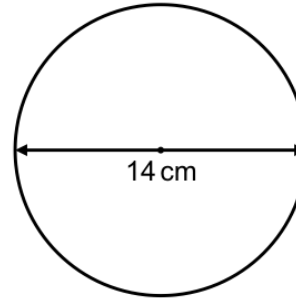
Some teachers travelled to school by car.
The table shows the number of teachers in the cars.

Number of teachers in one car	Number of cars
1	3
2	4
3	6
4	2

- a) What was the modal number of teachers in a car?
- b) What was the median number of teachers in a car?
- c) What was the mean number of teachers in a car?

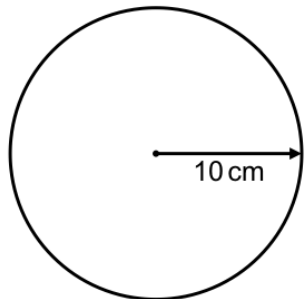
Question 18 - (2 marks available)

Work out the circumference of this circle.
Take π to be 3.142 and write down all the digits given by your calculator.



Question 19 - (2 marks available)

Work out the area of this circle.
Take π to be 3.142 and write down all the digits given by your calculator.



Question 20 - (4 marks available)

Work out and simplify where possible

a) $\frac{2}{5} + \frac{1}{3}$

b) $\frac{5}{9} - \frac{1}{2}$

Question 21 - (2 marks available)

Work out:

$$\frac{3}{4} \times \frac{5}{7}$$

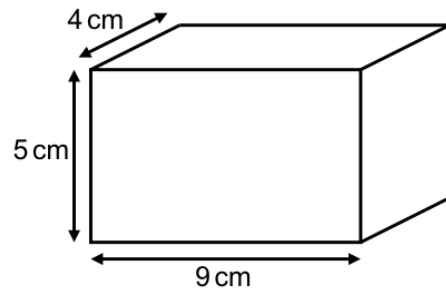
Question 22 - (3 marks available)

Work out, giving your answer in its simplest form:

$$\frac{2}{3} \div \frac{3}{5}$$

Question 23 - (2 marks available)

The diagram shows a cuboid.



What is the volume of the cuboid?

Question 24 - (1 marks available)

Work out 15% of £40

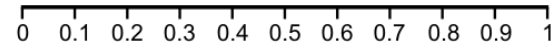
Question 25 - (2 marks available)

A shop is having a sale.
All items are reduced by 20%

Work out the sale price of an item normally priced at £120

Question 26 - (1 marks available)

Here is a probability scale:

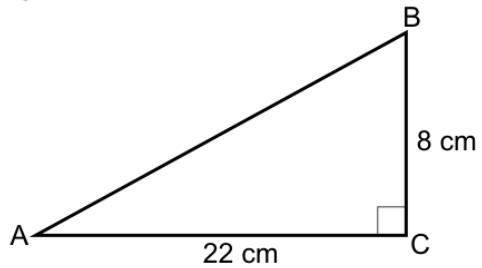


There are 3 white counters and 2 black counters in a bag.
I take one of the counters at random.

Put a cross on the probability scale to show the probability
that I have chosen one of the white counters.

Question 27 - (3 marks available)

Look at this triangle.



Work out length AB.

Question 28 - (1 marks available)

The ratio 60 : 48 in its simplest form is :

Question 29 - (2 marks available)

Share £747 in the ratio 2 : 7 between Tom and Ben.

Tom will get £

Ben will get £

Question 30 - (4 marks available)

Find the value of x in each of the following

a) $2x - 7 = 13$

b) $3x + 4 = 25$

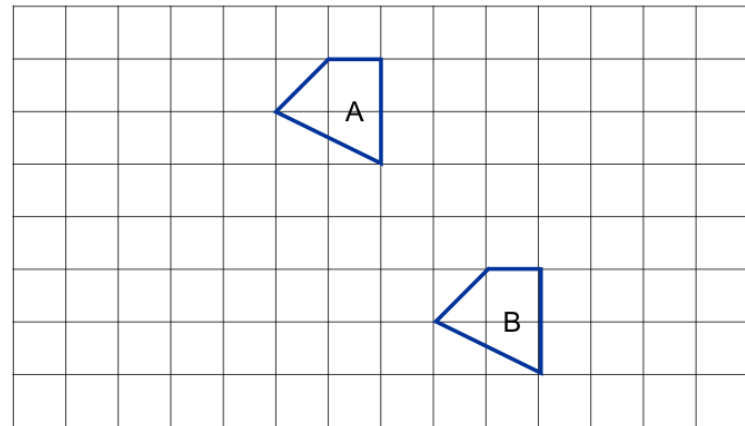
Question 31 - (2 marks available)

Solve

$$6x + 5 = 3x + 14$$

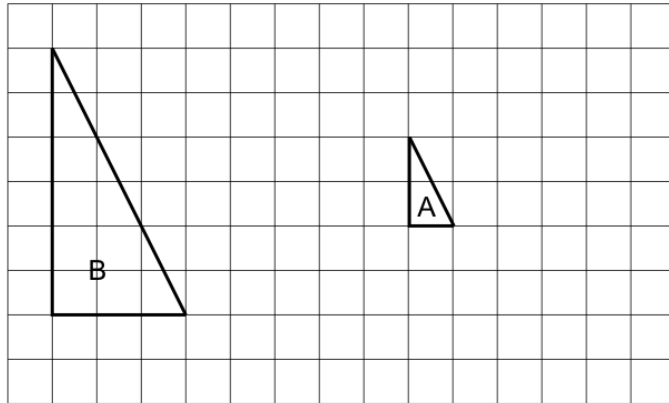
Question 32 - (2 marks available)

Shape A has been translated to shape B with vector $\begin{pmatrix} \quad \\ \quad \end{pmatrix}$



Question 33 - (3 marks available)

Shape A is enlarged to give shape B.



- What is the scale factor of the enlargement?
- Mark with a cross the centre of enlargement.

Question 34 - (3 marks available)

- Answer the following:
- $4 \times -3 \times 2 =$
 - $-2 \times 5 \times -4 =$
 - $-3 \times -1 \times -6 =$

Question 35 - (2 marks available)

Write the missing numbers in the table
The first row is done for you.

First number	Second number	Sum of first and second numbers
5	2	7
7	-3	
-10		-4

To find the 'sum' of two numbers you must add them together.

Question 36 - (3 marks available)

In a café, drinks are priced according to what size they are.
The table shows the different sizes and costs.

Size of drink	Cost
Extra Small	£1.00
Small	£1.50
Medium	£2.00
Large	£2.50
Extra Large	£3.00

- Gavin pays for **one extra small** and **three large** drinks. Altogether, how much did they cost?
- Lian pays for one **small**, one **medium** and one **extra large** drink. She pays with a £10 note. How much change should she get?