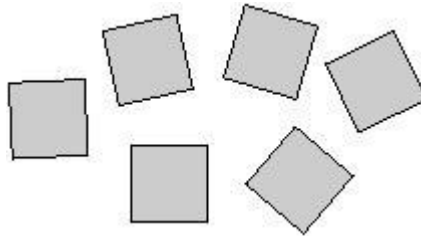


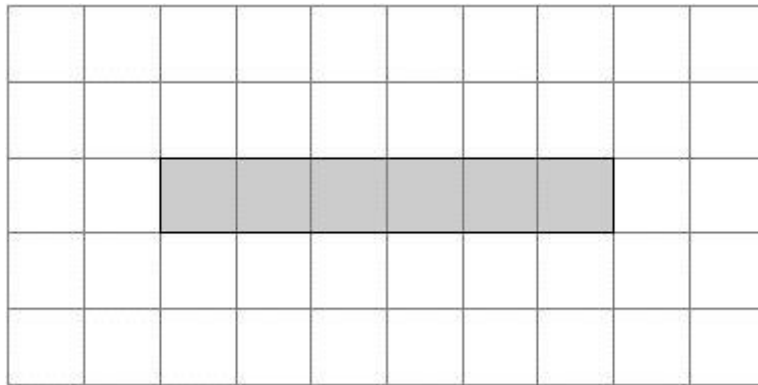
## 10 Question Challenge 3

### Q1. Square tiles

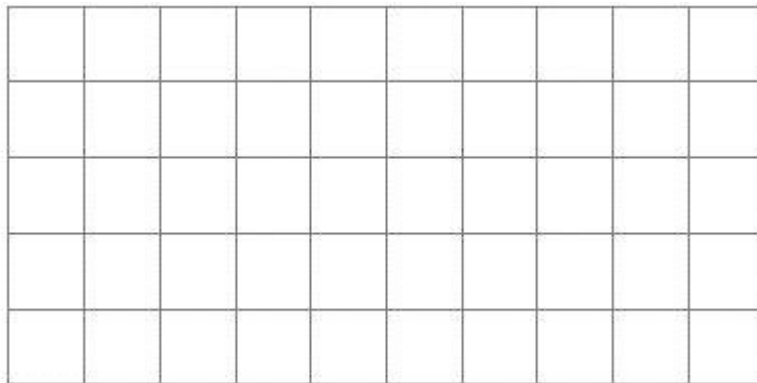
Stacey has **6** square tiles that are all the same size.



She joins the 6 tiles to make this rectangle.



- (a) On the grid below, **draw a different** rectangle she could make using the 6 tiles.



1 mark

- (b) Stacey wants to make a **square** using **more than her 6 tiles**.

How many **more** tiles does she need?



..... more

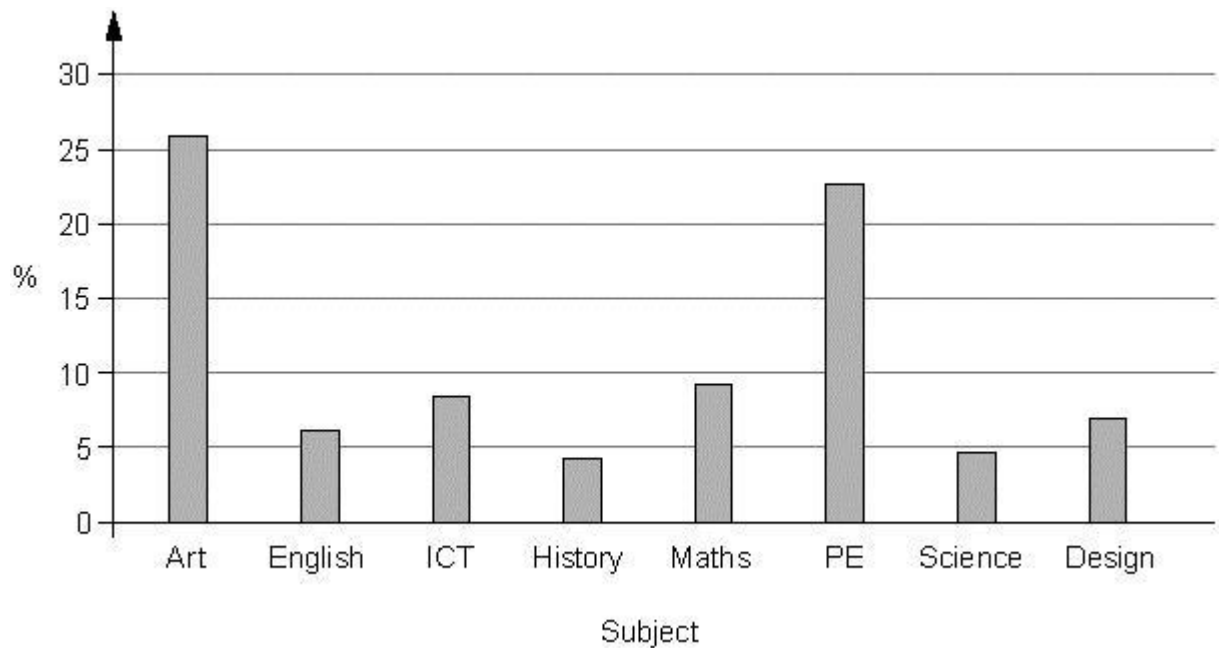
1 mark

## Q2.Favourite subjects

About 50 000 pupils answered the question:

What is your favourite subject at school?

The bar chart shows the results for the subjects that were most popular.



- (a) The most popular subject was Art.

Which subject was the **third** most popular?

.....

1 mark

- (b) About what percentage of the pupils chose PE?

..... %

1 mark

### Q3. Home delivery


A shop charges to deliver food to people's homes.

The cost depends on the day of delivery.

Day of delivery	Cost
Tuesday or Wednesday	£3.99
Monday or Thursday	£4.99
Friday or Saturday	£5.99
Sunday	£6.99

July 2008						
Su	M	Tu	W	Th	F	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		


- (a) What is the cost of delivery on **18 July 2008**?



1 mark


- (b) Mrs Jones wants a delivery **every Thursday** in **July 2008**.

How much will that cost altogether?



1 mark

- (c) What is the cost of delivery on **5 August 2008**?



1 mark

#### Q4. Choosing numbers

Write multiples to make these additions correct.

$$\begin{array}{c} \boxed{12} \\ \uparrow \\ \text{multiple of } 3 \end{array} + \begin{array}{c} \boxed{\phantom{00}} \\ \uparrow \\ \text{multiple of } 4 \end{array} = \begin{array}{c} \boxed{\phantom{00}} \\ \uparrow \\ \text{multiple of } 5 \end{array}$$

1 mark

$$\begin{array}{c} \boxed{\phantom{00}} \\ \uparrow \\ \text{multiple of } 3 \end{array} + \begin{array}{c} \boxed{\phantom{00}} \\ \uparrow \\ \text{multiple of } 4 \end{array} = \begin{array}{c} \boxed{30} \\ \uparrow \\ \text{multiple of } 5 \end{array}$$

1 mark

#### Q5. School uniform

A shop sells school uniform.

Two shirts and one jumper cost <b>£29</b>
One shirt and one jumper cost <b>£21</b>

How much does **one jumper** cost?



£

2 marks

### Q6. Halfway

- (a) What number is halfway between **-2** and **6**?

.....

1 mark

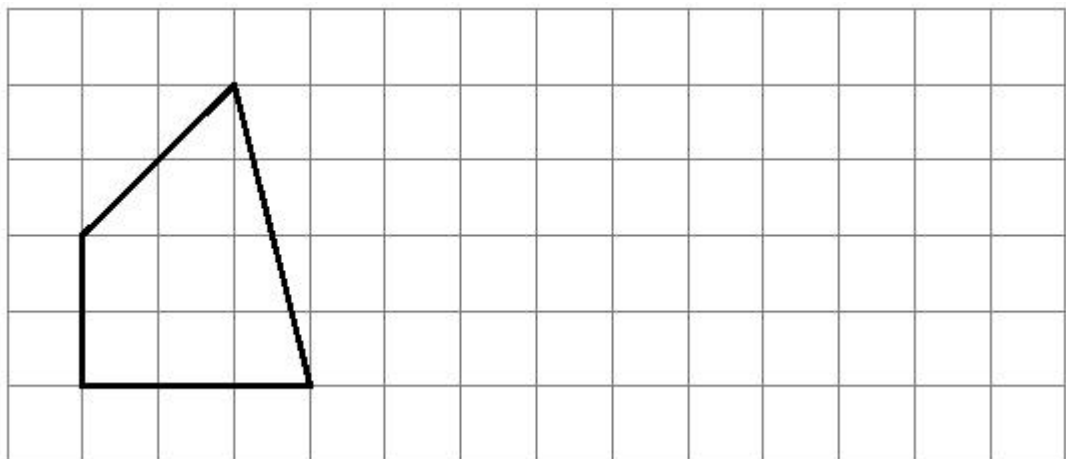
- (b) Complete the sentence.

**-10** is halfway between ..... and **8**

1 mark

### Q7. Quadrilateral

Here is a quadrilateral drawn on a square grid.

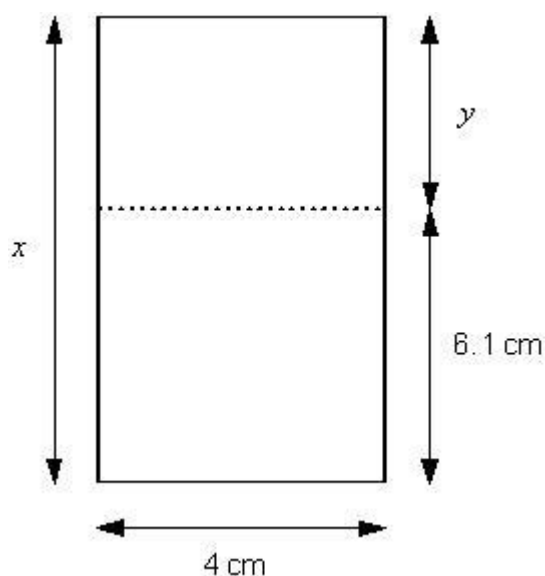


On the same grid, draw a **different quadrilateral** which has the **same area**.

2 marks

### Q8. Missing lengths

Look at the rectangle.



Not drawn accurately

The **total area** of the rectangle is  **$40\text{cm}^2$**

Work out lengths  $x$  and  $y$

*Handwritten mark*

$x = \dots\dots\dots \text{ cm}$       $y = \dots\dots\dots \text{ cm}$

2 marks

### Q9. The first square number is 1, and the sum of the **first 20** square numbers is **2870**

Work out the sum of the **first 21** square numbers.

*Handwritten mark*

.....


2 marks

**Q10.** I am thinking of two numbers.

When I **add** my numbers, the answer is **1**

When I **multiply** my numbers, the answer is **0.09**

What are my numbers?

 ..... and .....

1 mark

