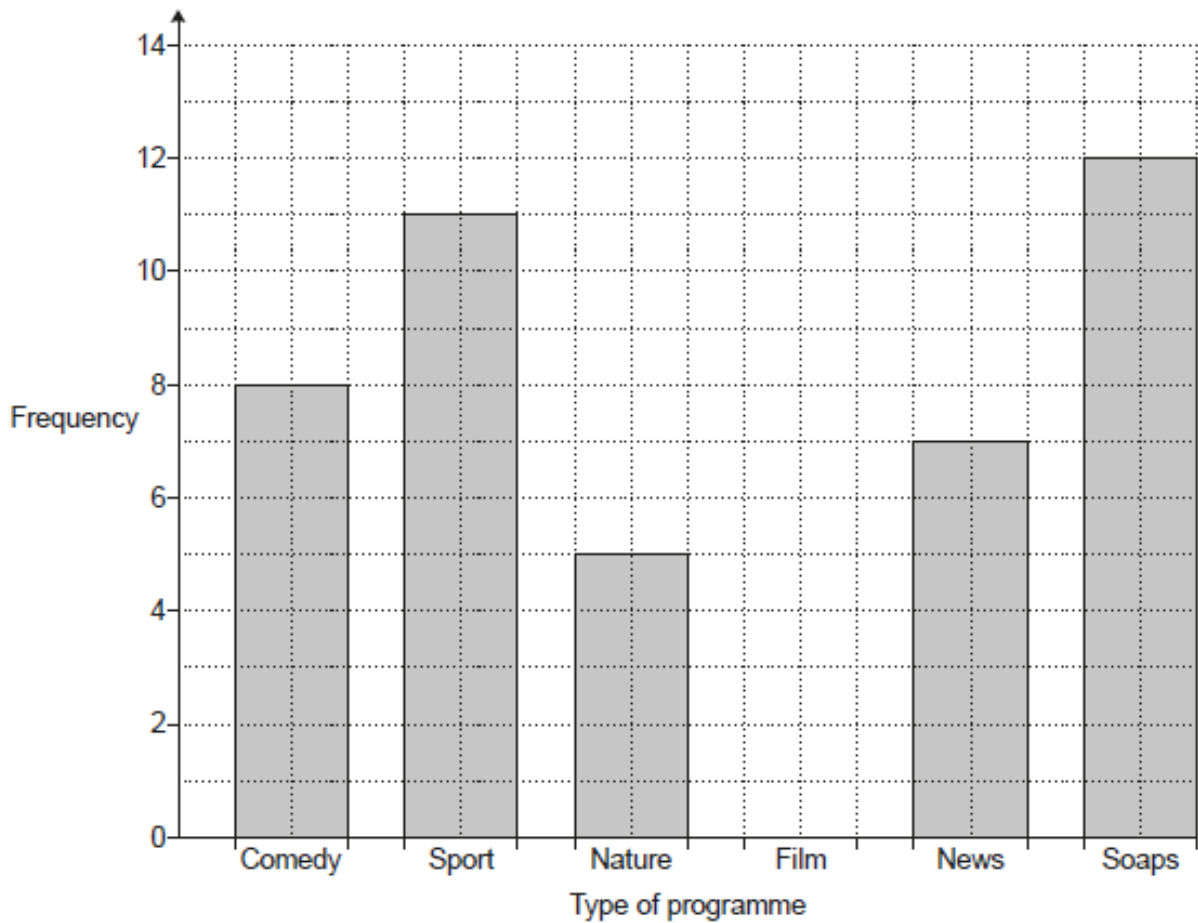


**GCSE Mathematics - Paper 1 (Foundation tier)**  
**J560/01** Paper 1 Mathematics (Foundation tier)

**Question Set 5**

- 1 Reece asked some friends what type of programme they watch most on television. The bar chart shows some of his results.



- (a) 10 people answered Film.

Complete the bar chart to show this information.

[1]

- (b) Complete these sentences.

(i) ..... was chosen by the most people.

[1]

(ii) ..... people chose News.

[1]

(iii) ..... fewer people chose Nature than Comedy.

[1]

**2** (a) Write 2% as a decimal.

(a) ..... [1]

(b) Write  $\frac{11}{20}$  as a percentage.

(b) .....% [1]

**3** Use one of the symbols  $<$ ,  $=$  or  $>$  to make each statement true.

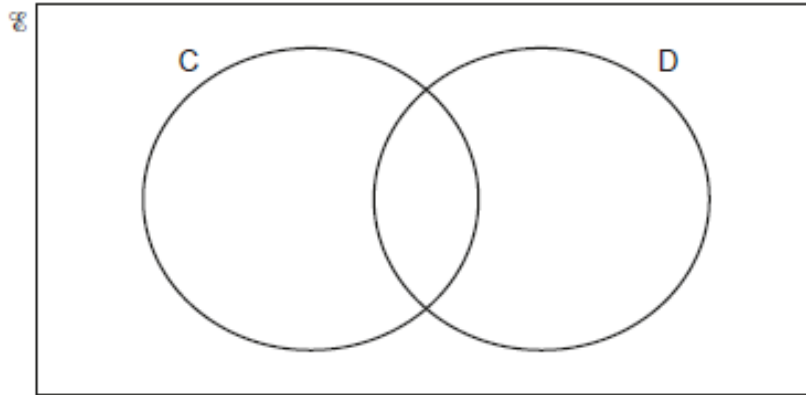
(a)  $0.7$  .....  $\frac{2}{3}$  [1]

(b)  $27.06$  .....  $27.59$  [1]

4 59 families are asked whether they have a cat (C) or a dog (D).

- 26 only have a cat.
- 14 only have a dog.
- 11 have both a cat and a dog.

(a) Show this information on the Venn diagram.



[1]

(b) (i) How many of the families do not have a cat or a dog?

(b)(i) ..... [1]

(ii) Write your answer in the correct place on the Venn diagram. [1]

(c) One of the families is chosen at random.

Write down the probability that they have a dog.

(c) ..... [2]

- 5 Nadia thinks of a number.  
She finds the square root and then divides by 5.  
Her answer is 20.

What number is she thinking of?

..... [2]

- 6** (a) A train is travelling with a velocity of 15m/s.  
It then accelerates at  $0.5\text{m/s}^2$  for 6 seconds.

Use the formula  $v = u + at$  to calculate the velocity of the train after the 6 seconds.

(a) ..... m/s [2]

- (b) Rearrange the formula  $v = u + at$  to make  $a$  the subject.

(b) ..... [2]

7 The table below shows the number of barrels of oil produced per day by some countries.

Country	Barrels of oil produced per day
USA	$1.17 \times 10^7$
China	$3.98 \times 10^6$
UK	$9.39 \times 10^5$
Cameroon	$9.32 \times 10^4$
Japan	$3.92 \times 10^3$

(a) Write the number of barrels of oil produced per day by Cameroon as an ordinary number.

(a) ..... [1]

(b) How many more barrels of oil per day did China produce than the UK?  
Give your answer in standard form, correct to 3 significant figures.

(b) ..... [4]

(c) Jamal says the USA produced approximately three times more barrels of oil than Japan.

Is he correct?  
Show how you decide.

Jamal is ..... because .....  
..... [2]

- 8 James is taking three examination papers in Spanish.  
Here are his first two results.

Paper 1:  $\frac{43}{80}$

Paper 2:  $\frac{38}{65}$

Paper 3 is out of 95.

The marks in each of the three papers are added together.

Find the lowest mark that James needs in Paper 3 to achieve 60% of the total marks.

..... [4]

- 9 Three people take  $2\frac{1}{2}$  hours to deliver leaflets to 270 houses.

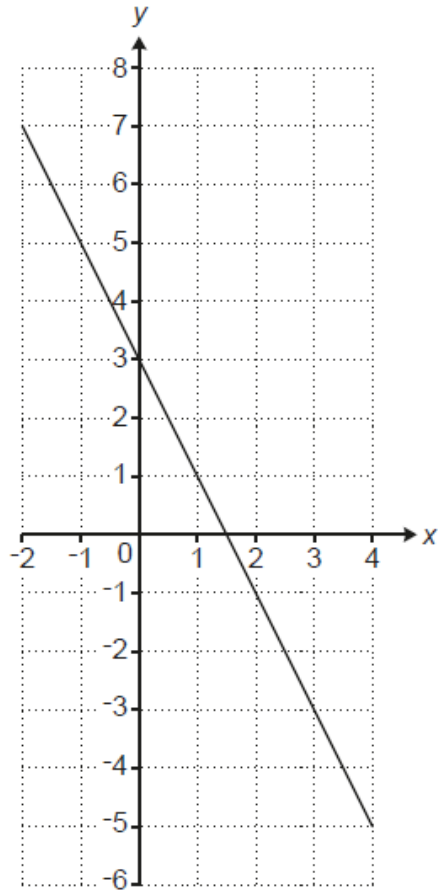
Assuming all people deliver leaflets at the same rate, how long will it take five people to deliver leaflets to 405 houses?

Give your answer in hours and minutes.

..... hours ..... mins [4]



10 This graph shows part of a straight line.



(a) Write down the  $y$ -intercept.

(a) ..... [1]

(b) Show that the gradient of the line is  $-2$ .

[1]

(c) Write down the equation of the line.

(c) ..... [1]

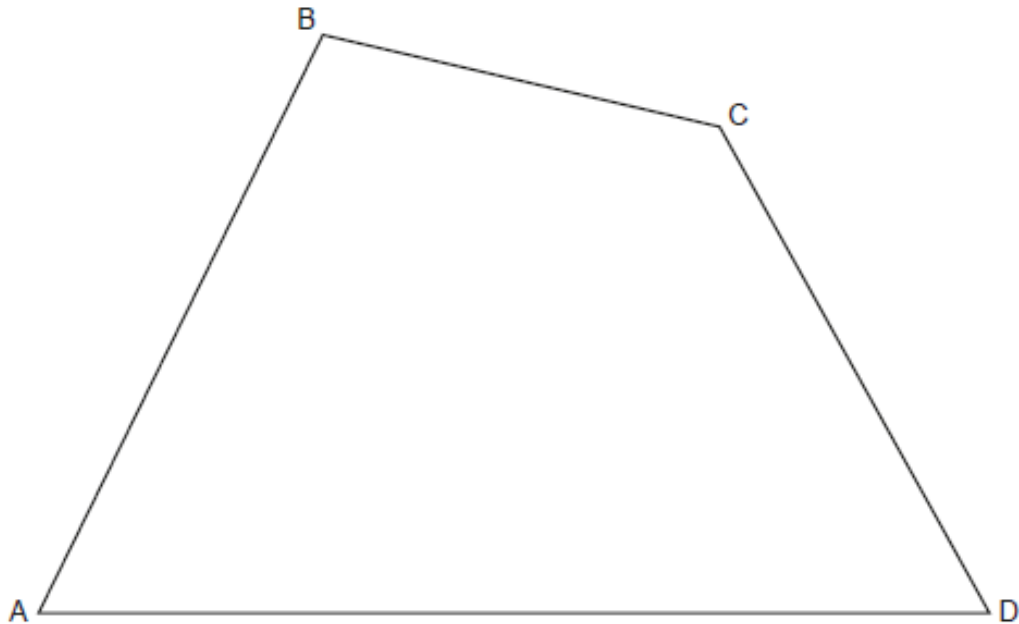
(d) The line continues to the right.

Will this line pass through the point (50, -103)?  
Show how you decide.

..... because .....

..... [2]

11 ABCD is a quadrilateral.



- (a) Construct the bisector of angle ABC.  
Show all your construction lines. [2]
- (b) Construct the perpendicular bisector of BC.  
Show all your construction lines. [2]
- (c) Shade the region which is
- nearer to BC than to AB
  - and
  - nearer to B than to C.
- [1]

**12** Lily buys and sells microwaves.

She buys each one for £32 and sells it for £60.  
She also pays £7 for the delivery of each microwave she sells.

If she sells a microwave that is faulty then Lily must pay for its repair and redelivery. This costs her another £25 for each faulty microwave.

Last month, 6 out of the 80 microwaves Lily sold were faulty.

This month she has orders for 133 microwaves.

Calculate her expected percentage profit on this month's order.  
Showing your working in the boxes below may help you present your work.

Expected number of faulty microwaves:	Expected costs:
Income from sales:	Expected percentage profit:

..... % **[6]**

**Total Marks for Question Set 5: 50**

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