

GCSE (9-1) Mathematics
J560/02 Paper 2 (Foundation Tier)

Question Set 3

1. Work out.

(a) $89 + 14$

(a) [1]

(b) 17×21

(b) [2]

2. Complete each statement by writing the missing value in the box.

(a) $\frac{2}{5} = \frac{4}{\square}$ [1]

(b) $2\frac{1}{3} = \frac{\square}{3}$ [1]

(c) $7 \times 7 \times 7 \times 7 \times 7 = 7^{\square}$ [1]

3. (a) Write 0.3 as a fraction.

(a) [1]

(b) Write $\frac{1}{4}$ as a decimal.

(b) [1]

4. Hannah saves an amount of money each week.
Here are the amounts, in pounds, that she saved in the first 5 weeks of 2019.

13 58 11 22 11

(a) Find

(i) the median of the five amounts,

(a)(i) £ [2]

(ii) the range of the five amounts.

(ii) £ [2]

(b) In the 6th week, she also saved some money.
The mean amount that Hannah saved each week over the 6 weeks was £22.

How much did she save in the 6th week?

(b) £ [3]

5. A man running at a constant speed of 5 metres per second takes 66 seconds to complete a particular distance.
A horse completes the same distance running at a constant speed of 15 metres per second.

Find the difference, in seconds, in the times taken by the man and by the horse to run this distance.

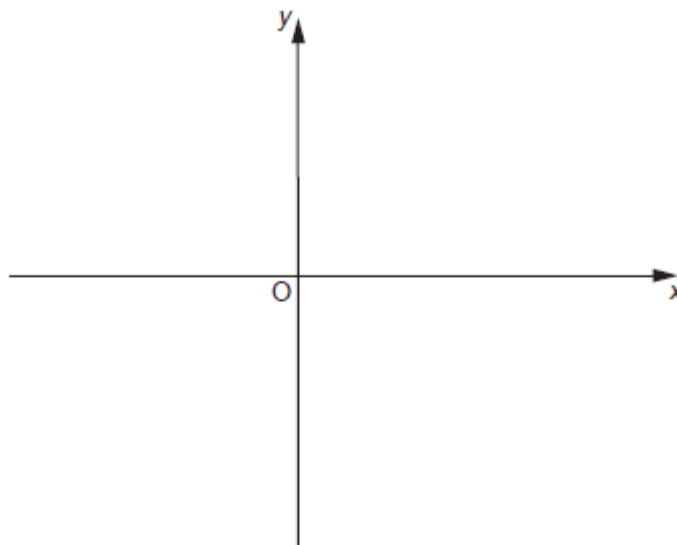
..... seconds [3]

6. (a) (i) Sketch the graph of $y = 2$.



[2]

- (ii) Sketch the graph of $y = x + 1$.



[2]

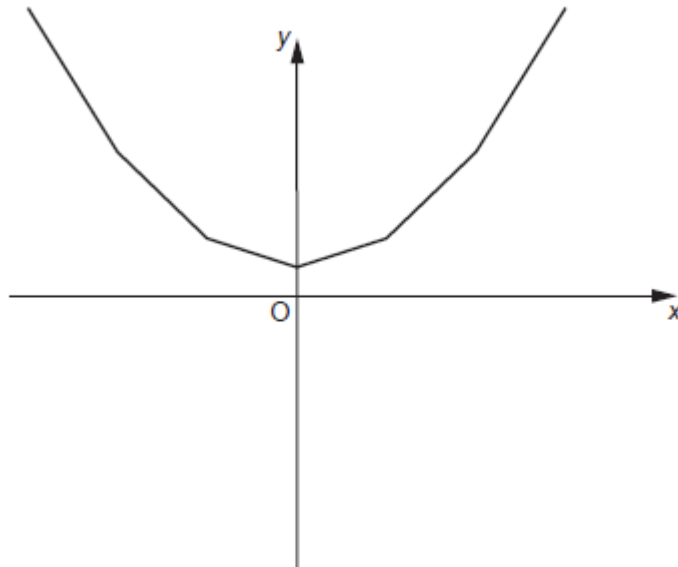
- (iii) Ceri says that the graphs of $y = 2$ and $y = x + 1$ cross at the point $(2, 3)$.

Explain the error in her answer.

.....

..... [1]

(b) Oliver has sketched the graph of $y = x^2$ below.



Make two comments about the accuracy of his sketch.

- 1
-
- 2
-

[2]

7. Angie is planning a presentation evening. She writes down her costs and income.

Costs
10 staff each working 6 hours at £8 per hour
Food: 60 meals at £8.95 each
Prizes: 12 prizes at £19.99 each

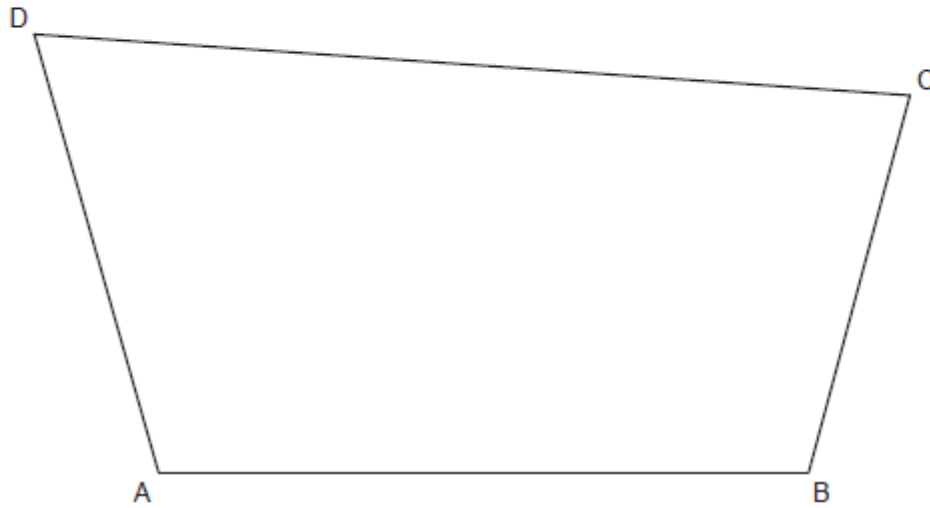
Income
60 guests each paying £5
Sponsorship £1000

Angie thinks she will make a small profit.

Use estimation to decide if Angie is correct.
Show all of your working.

8. The diagram shows the scale drawing of a garden ABCD.

Scale: 1 cm represents 5 m



A tree is to be planted in the garden so that it is

- at least 10m from AB
- and
- closer to CD than CB
- and
- at least 15m from D.

Using a ruler and compasses only, construct and shade the region in which the tree can be planted.

[6]

9. Solve by factorising.

$$x^2 + 9x + 20 = 0$$

$$x = \dots\dots\dots \text{ or } x = \dots\dots\dots \text{ [3]}$$

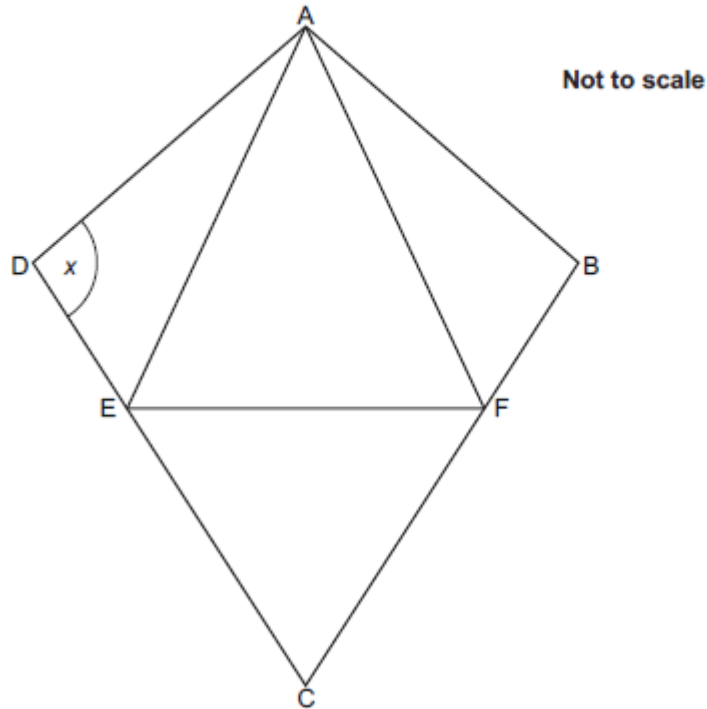
10. On a plane, $\frac{2}{5}$ of the passengers were British.

30% of the British passengers were men.
There were 36 British men on the plane.

Find the total number of passengers on the plane.

..... [5]

11. The diagram shows a kite, ABCD.
 AFE and CEF are equilateral triangles.



(a) Write down a mathematical name for quadrilateral AFCE.

(a) [1]

(b) The ratio of angle DAE : angle EAF = 1 : 4.

Work out angle x .

Write on the diagram the values of any other angles you use in your working.

(b) $x = \dots\dots\dots^\circ$ [4]

Total Marks for Question Set 3: 50

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