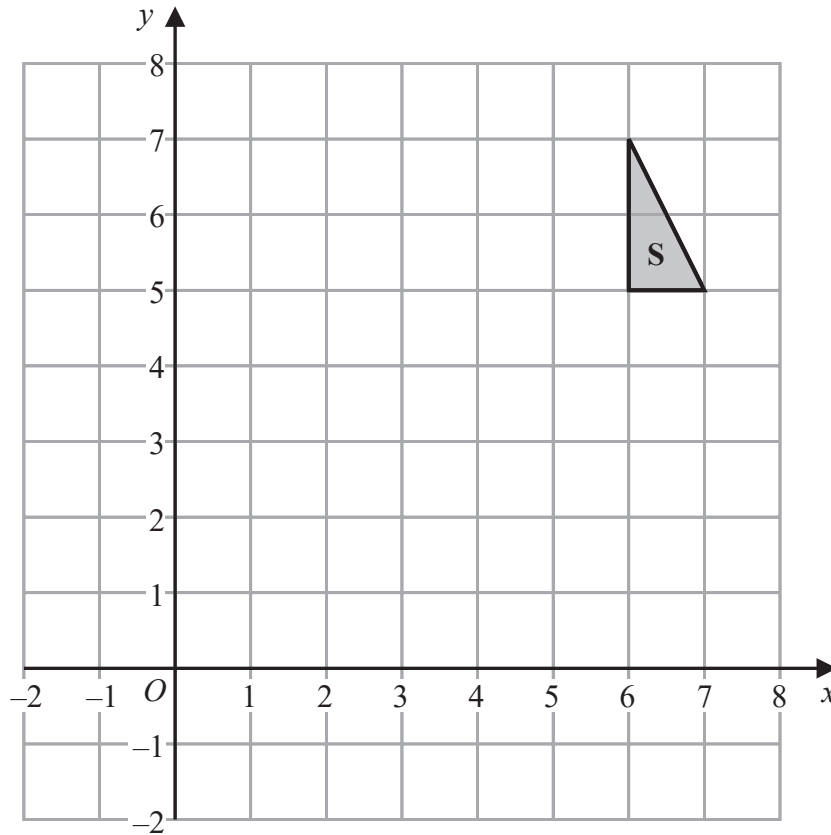


11 Here is a triangle S drawn on a grid of squares.



- (a) On the grid, reflect triangle S in the line with equation  $x = 5$   
Label the new triangle T. (2)
- (b) On the grid, reflect triangle T in the line with equation  $x = 2$   
Label the new triangle U. (1)
- (c) Describe fully the single transformation that maps triangle S onto triangle U. (2)

(Total for Question 11 is 5 marks)

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12 Andros wants to make a playlist of four songs for a friend.

The total time taken by the four songs will be 20 minutes.

The time taken by each of the first three songs is shown below.

First song                      6 minutes 16 seconds

Second song                    4 minutes 28 seconds

Third song                      4 minutes 35 seconds

Work out the time taken by the fourth song.

Give your answer in minutes and seconds.

minutes

seconds

(Total for Question 12 is 3 marks)



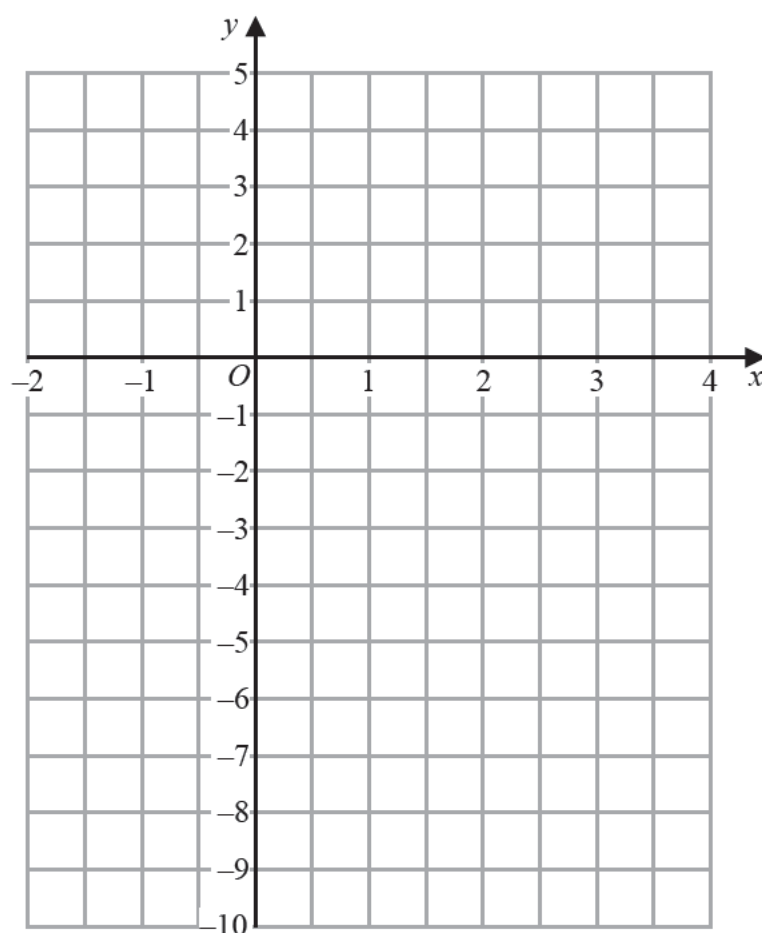
P 5 9 0 2 1 A 0 1 3 2 8

13 (a) Complete the table of values for  $y = 2x - 5$

$x$	-2	-1	0	1	2	3	4
$y$		-7			-1	1	

(2)

(b) On the grid, draw the graph of  $y = 2x - 5$  for values of  $x$  from -2 to 4



(2)

(c) Mark with a cross ( $\times$ ) a point on the grid that has coordinates satisfying both

$$x < 2 \text{ and } y > 2x - 5$$

Label this point  $P$ .

(2)

(Total for Question 13 is 6 marks)



14 (a) Work out  $\sqrt{64 \times 36}$

(1)

(b) Work out  $11^4$

(1)

(Total for Question 14 is 2 marks)



15 The diagram shows Jonah's fish tank.

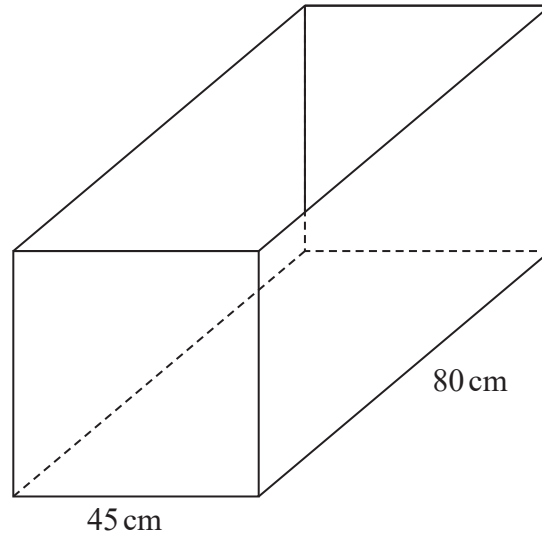


Diagram **NOT** accurately drawn

The fish tank is in the shape of a cuboid.

Jonah wants to keep 20 fish in the fish tank.

He knows that he must have 9 litres of water for each fish in the fish tank.

What is the minimum depth of water in the fish tank that Jonah must have?

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cm

(Total for Question 15 is 4 marks)



16 Show that  $1\frac{2}{3} + 2\frac{3}{4} = 4\frac{5}{12}$

(Total for Question 16 is 3 marks)



17 There are 60 children in a club.

In the club, the ratio of the number of girls to the number of boys is 3 : 1

$\frac{3}{5}$  of the girls play a musical instrument.

$\frac{4}{5}$  of the boys play a musical instrument.

What fraction of the 60 children play a musical instrument?

(Total for Question 17 is 4 marks)

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18

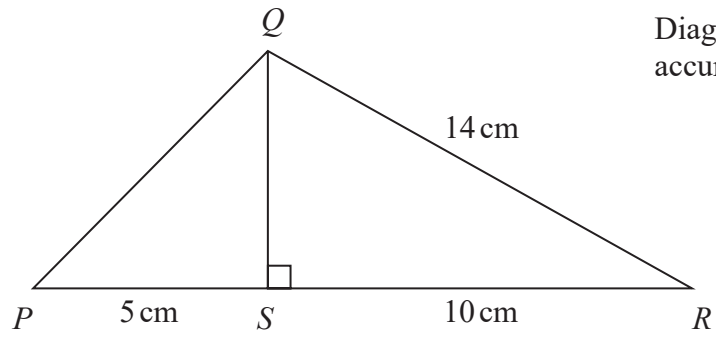


Diagram **NOT** accurately drawn

In triangle  $PQR$ ,

$S$  is the point on  $PR$  such that angle  $RSQ = 90^\circ$

$RQ = 14$  cm

$RS = 10$  cm

$SP = 5$  cm

Work out the length of  $PQ$ .

cm

(Total for Question 18 is 4 marks)

