

17 The table shows information about the weights, in kilograms, of 40 babies.

Weight (w kg)	Frequency
$2 < w \leq 3$	12
$3 < w \leq 4$	16
$4 < w \leq 5$	9
$5 < w \leq 6$	2
$6 < w \leq 7$	1

(a) Write down the modal class.

.....
(1)

(b) Work out an estimate for the mean weight of the 40 babies.

..... kg
(4)

One of the 40 babies is going to be chosen at random.

(c) Find the probability that this baby has a weight of more than 5 kg.

.....
(2)

(Total for Question 17 is 7 marks)



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18 120 children go on an activity holiday.
The ratio of the number of girls to the number of boys is 3 : 5

On Sunday, all the children either go sailing or go climbing.

$\frac{16}{25}$ of the boys go climbing.

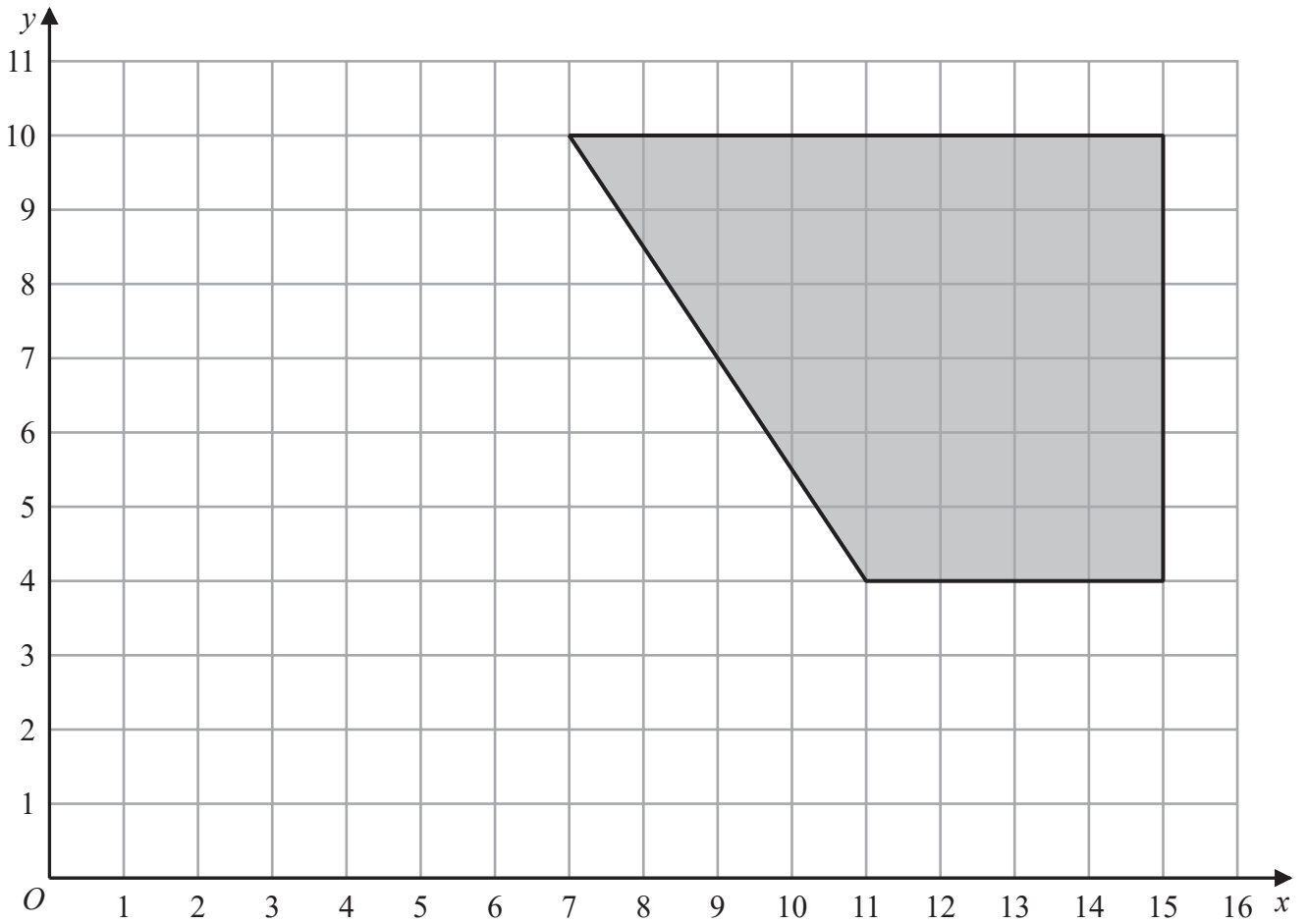
Twice as many girls go sailing as go climbing.

Work out how many children go sailing on Sunday.

.....
(Total for Question 18 is 6 marks)



19



On the grid, enlarge the shaded shape with scale factor $\frac{1}{2}$ and centre (1, 2)

(Total for Question 19 is 2 marks)

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20 (a) Write 7.8×10^{-4} as an ordinary number.

.....
(1)

(b) Work out $\frac{5.6 \times 10^4 + 7 \times 10^3}{2.8 \times 10^{-3}}$

Give your answer in standard form.

.....
(2)

(Total for Question 20 is 3 marks)



21 (a) Expand and simplify $(m - 8)(m + 5)$

.....
(2)

(b) Factorise fully $5y + 20y^2$

.....
(2)

(c) Simplify $(p^2 + 3)^0$

.....
(1)



(d) Solve $3(2x - 5) = \frac{9 - x}{2}$

Show clear algebraic working.

$x = \dots\dots\dots$
(4)

(Total for Question 21 is 9 marks)

Turn over for Question 22

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22 Here is a right-angled triangle.

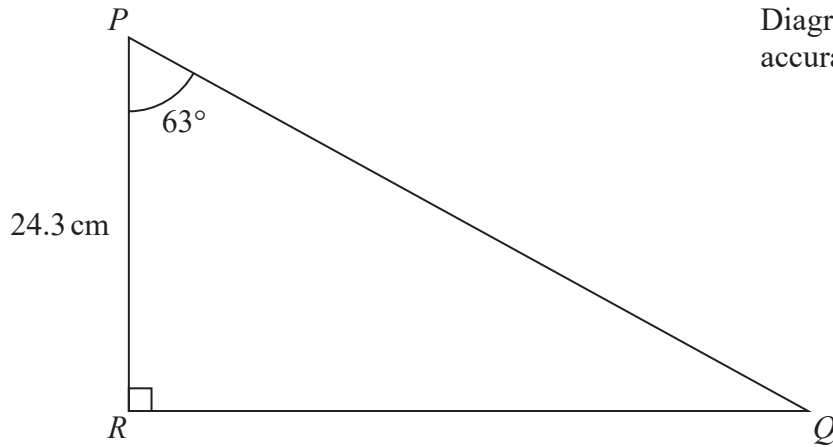


Diagram **NOT** accurately drawn

Calculate the length of PQ .
Give your answer correct to 3 significant figures.

..... cm

(Total for Question 22 is 3 marks)

TOTAL FOR PAPER IS 100 MARKS

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