GCSE Grade 5

Maths Booklet 5

Paper 2H
Calculator

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1 The table shows some information about the foot lengths of 40 adults.

Foot length (f cm)	Number of adults
$16 \leqslant f < 18$	3
$18 \leqslant f < 20$	6
$20 \leqslant f < 22$	10
$22 \leqslant f < 24$	12
$24 \leqslant f < 26$	9

(a) Write down the modal class interval.

.....

(1)

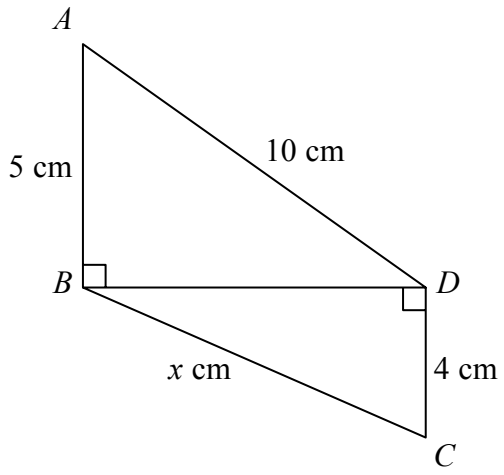
(b) Calculate an estimate for the mean foot length.

..... cm

(3)

(Total for Question 1 is 4 marks)

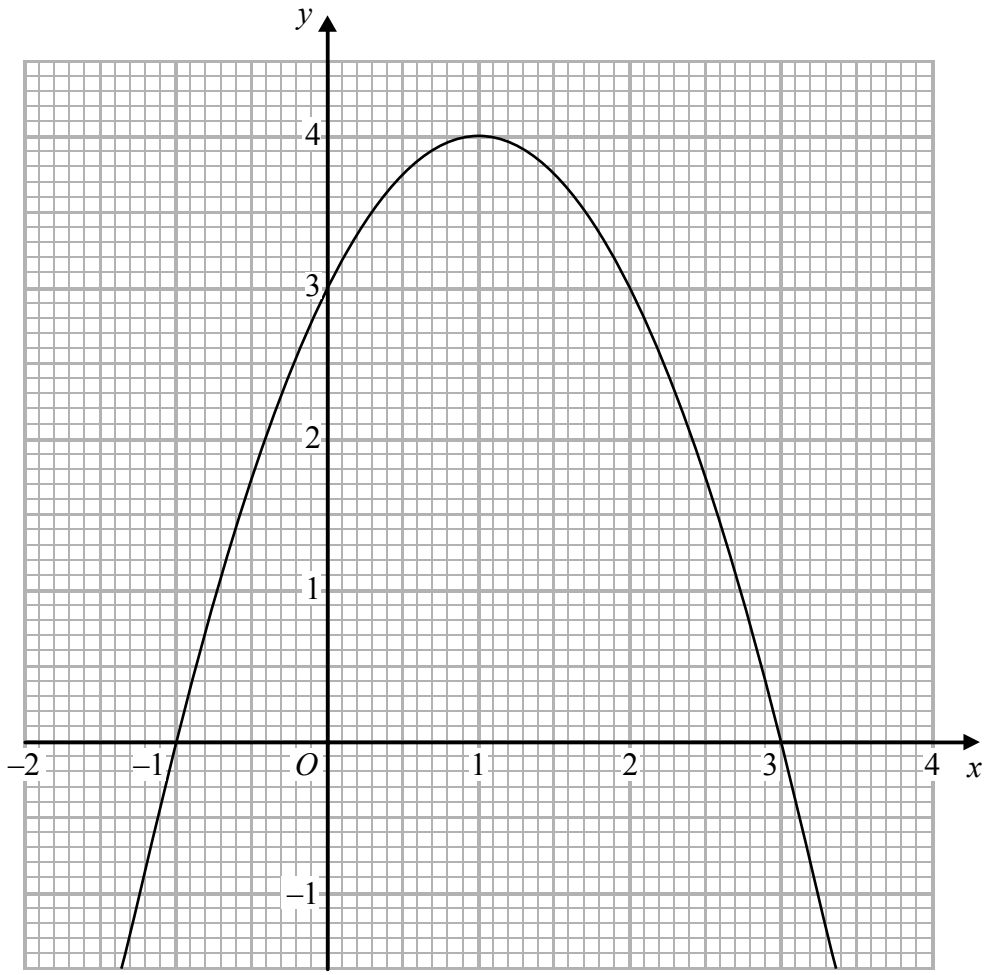
2 Triangles *ABD* and *BCD* are right-angled triangles.



Work out the value of x.
Give your answer correct to 2 decimal places.

(Total for Question 2 is 4 marks)

3 The graph of $y = f(x)$ is drawn on the grid.



(a) Write down the coordinates of the turning point of the graph.

(.....,.....)

(1)

(b) Write down the roots of $f(x) = 2$

.....

(1)

(c) Write down the value of f(0.5)

.....

(1)

(Total for Question 3 is 3 marks)

4 In a box of pens, there are

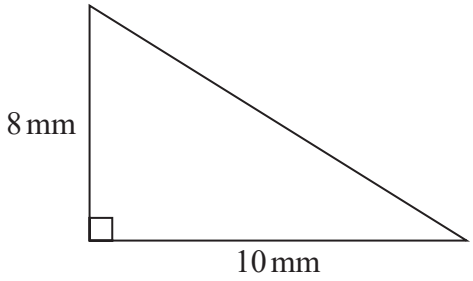
three times as many red pens as green pens
and two times as many green pens as blue pens.

For the pens in the box, write down
the ratio of the number of red pens to the number of green pens to the number of blue pens.

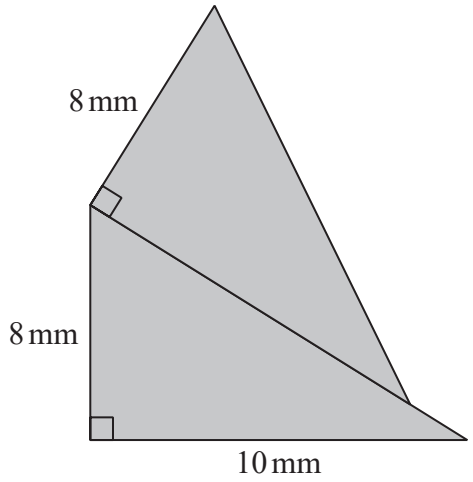
.....

(Total for Question 4 is 2 marks)

5 Here is a right-angled triangle.



The shaded shape below is made from two of these triangles.

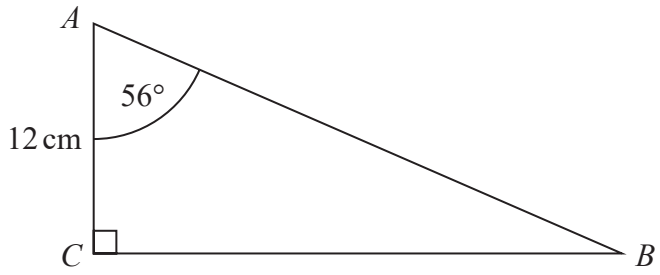


Work out the perimeter of the shaded shape.
Give your answer correct to 3 significant figures.

..... mm

(Total for Question 5 is 4 marks)

6 *ABC* is a right-angled triangle.

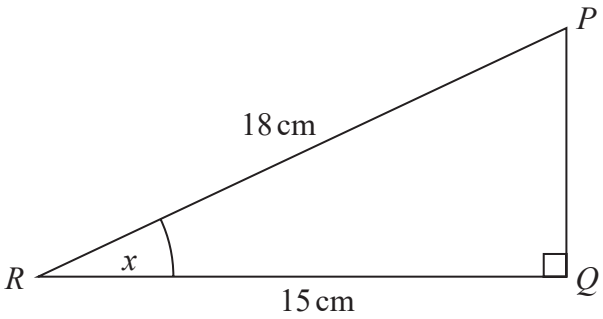


(a) Work out the length of *BC*.
Give your answer correct to 1 decimal place.

..... cm

(2)

PQR is a right-angled triangle.



(b) Work out the size of the angle marked *x*.
Give your answer correct to 1 decimal place.

..... °

(2)

(Total for Question 6 is 4 marks)

7 Liquid **A** has a density of 1.8 g/cm^3
Liquid **B** has a density of 1.2 g/cm^3

80 cm^3 of liquid **A** is mixed with 40 cm^3 of liquid **B** to make 120 cm^3 of liquid **C**.

Work out the density of liquid **C**.

..... g/cm^3

(Total for Question 7 is 3 marks)

8 The grouped frequency table gives information about the time, in minutes, taken by 50 people to solve a puzzle.

Time (t minutes)	Frequency
$0 < t \leqslant 10$	5
$10 < t \leqslant 20$	8
$20 < t \leqslant 30$	12
$30 < t \leqslant 40$	15
$40 < t \leqslant 50$	7
$50 < t \leqslant 60$	3

Brian was asked to draw a cumulative frequency table for this information.

This is the table that Brian drew.

Time (t minutes)	Cumulative frequency
$0 < t \leqslant 10$	5
$10 < t \leqslant 20$	13
$20 < t \leqslant 30$	25
$30 < t \leqslant 40$	40
$40 < t \leqslant 50$	47
$50 < t \leqslant 60$	50

Write down **one** thing that is wrong with this cumulative frequency table.

.....

.....

.....

(Total for Question 8 is 1 mark)