

11 The weight of a cat is 4.3 kg correct to 2 significant figures.

(a) Write down the upper bound of the weight of the cat.

..... kg
(1)

(b) Write down the lower bound of the weight of the cat.

..... kg
(1)

$$G = e - f$$

$e = 17$ correct to the nearest integer

$f = 9.4$ correct to one decimal place

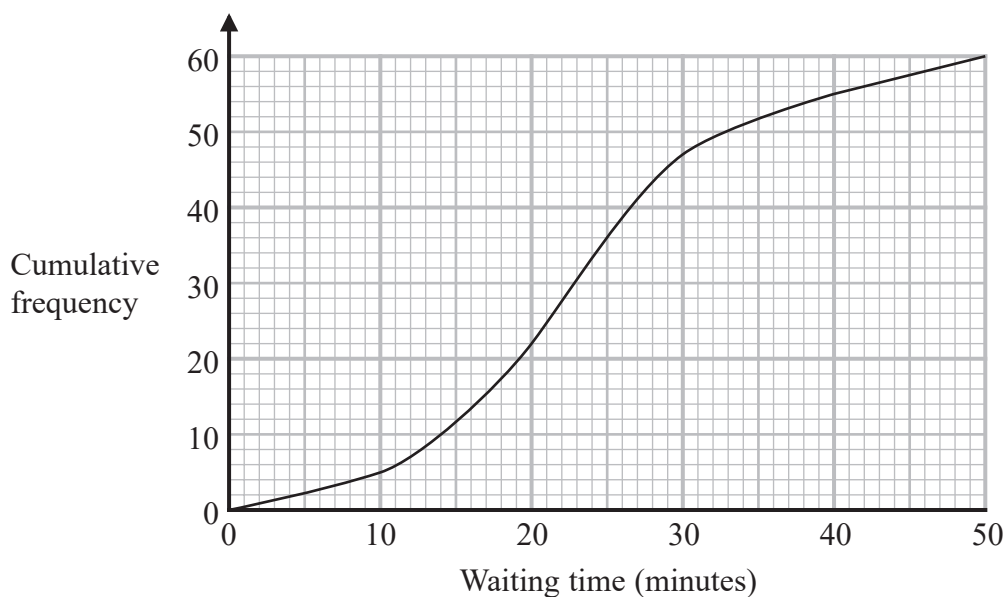
(c) Work out the upper bound for the value of G .

.....
(2)

(Total for Question 11 is 4 marks)



- 12 The cumulative frequency graph gives information about the waiting times, in minutes, of people with appointments at Hospital A.



- (a) Use the graph to find an estimate of the median waiting time at Hospital A.

..... minutes
(1)

- (b) Use the graph to find an estimate of the interquartile range of the waiting times at Hospital A.

..... minutes
(2)

At a different hospital, Hospital B, the median waiting time is 28 minutes and the interquartile range of the waiting times is 19 minutes.

- (c) Compare the waiting times at Hospital A with the waiting times at Hospital B.

.....

.....

.....

.....

(2)

(Total for Question 12 is 5 marks)



13 (a) Use algebra to show that $0.5\dot{7}\dot{2} = \frac{63}{110}$

(2)

Given that y is a prime number,

(b) express $\frac{3}{2 - \sqrt{y}}$ in the form $\frac{a + b\sqrt{y}}{c - y}$ where a , b and c are integers.

.....
(2)

(Total for Question 13 is 4 marks)



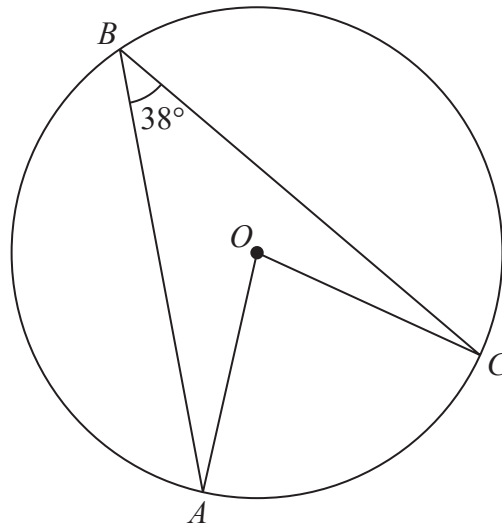


Diagram **NOT**
accurately drawn

A , B and C are points on a circle, centre O .
Angle $ABC = 38^\circ$

Work out the size of angle OAC .
Give a reason for each stage of your working.

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(Total for Question 14 is 4 marks)



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15 The diagram shows two right-angled triangles, DEF and EFG .

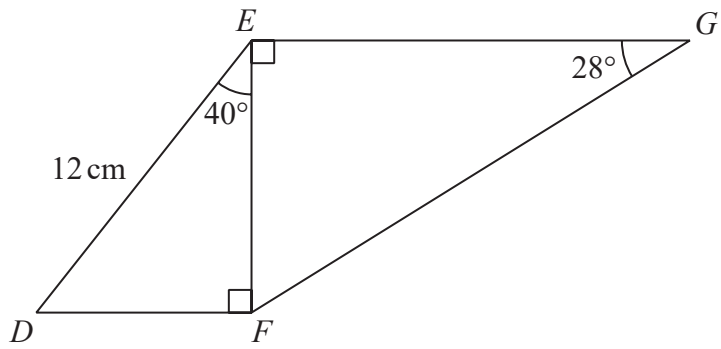


Diagram NOT accurately drawn

Work out the length of EG .
Give your answer correct to 3 significant figures.

..... cm

(Total for Question 15 is 4 marks)



P 5 8 4 4 3 A 0 1 5 2 4

16 Steffi is going to play one game of tennis and one game of chess.

The probability that she will win the game of tennis is 0.6

The probability that she will win **both** games is 0.42

Work out the probability that she will **not** win either game.

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.....
(Total for Question 16 is 4 marks)



17 The function f is such that $f(x) = (x - 4)^2$ for all values of x .

(a) Find $f(1)$

.....
(1)

(b) State the range of the function f .

.....
(1)

The function g is such that $g(x) = \frac{4}{x+3}$ $x \neq -3$

(c) Work out $fg(2)$

.....
(2)

(Total for Question 17 is 4 marks)

