

GCSE Grade 5

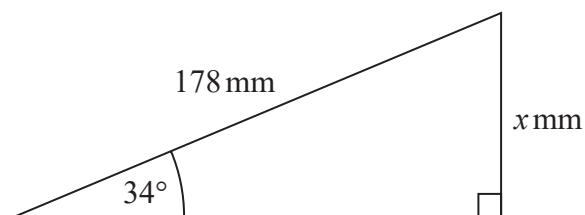
Maths

Booklet 4

Paper 2H
Calculator

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1



Work out the value of x .
Give your answer correct to 1 decimal place.

(Total for Question 1 is 2 marks)

2 $\mathbf{a} = \begin{pmatrix} 3 \\ 4 \end{pmatrix}$ $\mathbf{b} = \begin{pmatrix} 5 \\ -2 \end{pmatrix}$

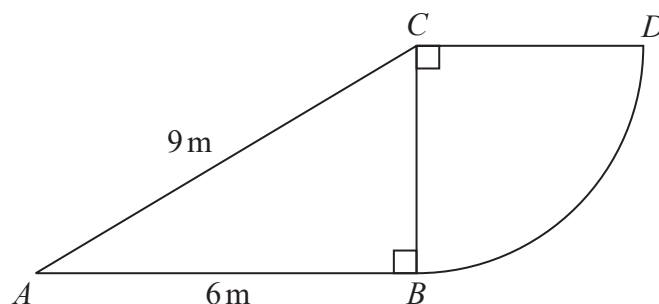
Find $2\mathbf{a} - 3\mathbf{b}$ as a column vector.

$$\begin{pmatrix} \dots \\ \dots \\ \dots \end{pmatrix}$$

(Total for Question 2 is 2 marks)



- 3 The diagram shows a right-angled triangle and a quarter circle.



The right-angled triangle ABC has angle $ABC = 90^\circ$
The quarter circle has centre C and radius CB .

Work out the area of the quarter circle.
Give your answer correct to 3 significant figures.
You must show all your working.

..... m^2

(Total for Question 3 is 4 marks)



4 Tariq buys a laptop.

He gets a discount of 5% off the normal price.

Tariq pays £551 for the laptop.

(a) Work out the normal price of the laptop.

£
(2)

Joan invests £6000 in a savings account.

The savings account pays compound interest at a rate of

2.4% for the first year

1.7% for each extra year.

(b) Work out the value of Joan's investment at the end of 3 years.

£
(3)

(Total for Question 4 is 5 marks)

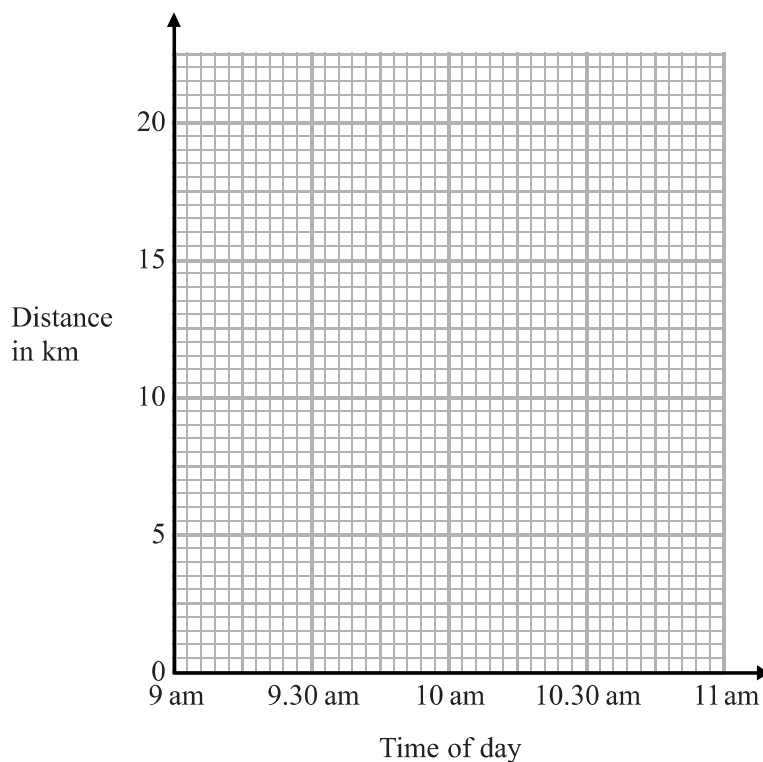


5 At 9 am, Bradley began a journey on his bicycle.

From 9 am to 9.36 am, he cycled at an average speed of 15 km/h.

From 9.36 am to 10.45 am, he cycled a further 8 km.

(a) Draw a travel graph to show Bradley's journey.



(3)

From 10.45 am to 11 am, Bradley cycled at an average speed of 18 km/h.

(b) Work out the distance Bradley cycled from 10.45 am to 11 am.

..... km

(2)

(Total for Question 5 is 5 marks)



- 6 Toby invested £7500 for 2 years in a savings account.
He was paid 4% per annum compound interest.

How much money did Toby have in his savings account at the end of 2 years?

£

(Total for Question 6 is 2 marks)

- 7 Becky has some marbles.
Chris has two times as many marbles as Becky.
Dan has seven more marbles than Chris.

They have a total of 57 marbles.

Dan says,

“If I give some marbles to Becky, each of us will have the same number of marbles.”

Is Dan correct?

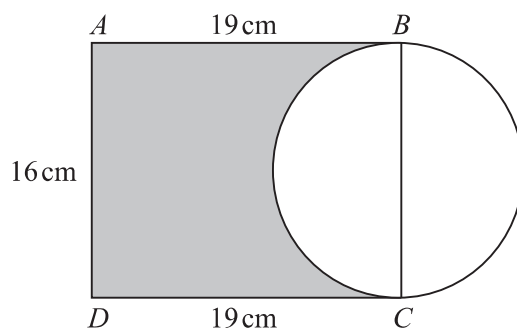
You must show how you get your answer.

(Total for Question 7 is 3 marks)



S 4 9 8 1 8 A 0 7 2 4

- 8 Here is a diagram showing a rectangle, $ABCD$, and a circle.



BC is a diameter of the circle.

Calculate the percentage of the area of the rectangle that is shaded.
Give your answer correct to 1 decimal place.

..... %

(Total for Question 8 is 4 marks)

