Chhetri Academy

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GCSE MATHS

Geometry and measures

Edexcel 1MA1 | Subtopic collection Topic 39

Right-angled trigonometry

Foundation tier

Past paper question booklet

12	2013-2024	Foundation
question groups	available papers	tier

Before you begin

1. Show working and use units where appropriate.
2. Use extra paper if you need more space.
3. Print at actual size (100%) for measurement questions.

Name _____ **Date** _____

Whole questions are retained for context; some parts cover other points. Legacy sources are labelled.

***18**

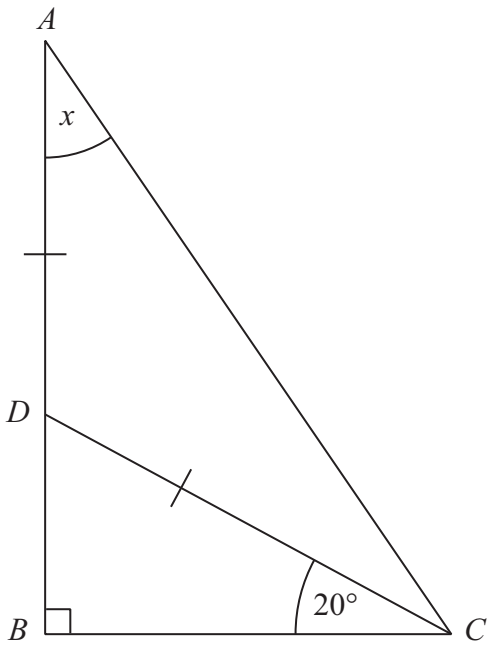


Diagram **NOT** accurately drawn

Triangle ABC is a right-angled triangle.
ADB is a straight line.
$DA = DC$
Angle $BCD = 20°$

Work out the size of the angle marked x.
You must give reasons for each stage of your working.

(Total for Question 18 is 4 marks)

17 The diagram shows a right-angled triangle.

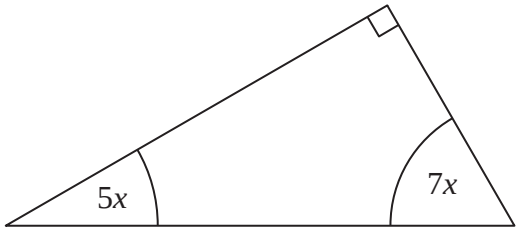


Diagram **NOT** accurately drawn

All the angles are in degrees.

Work out the size of the smallest angle.

.....°

(Total for Question 17 is 3 marks)

15

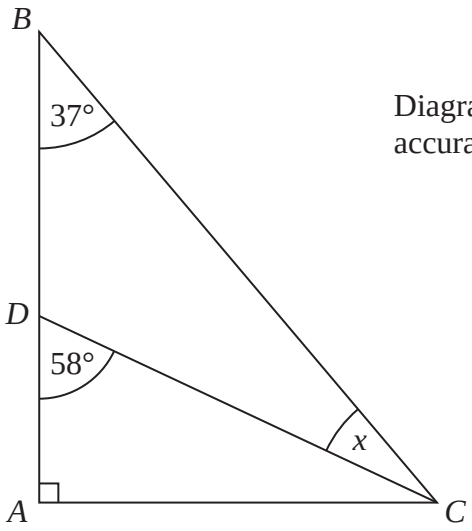


Diagram **NOT** accurately drawn

ABC is a right-angled triangle.
ADB is a straight line.

Work out the size of the angle marked *x*.

.....°

(Total for Question 15 is 2 marks)

23 Use your calculator to work out $\sqrt{\dfrac{\sin 25° + \sin 40°}{\cos 25° - \cos 40°}}$

(a) Write down all the figures on your calculator display.

.....

(2)

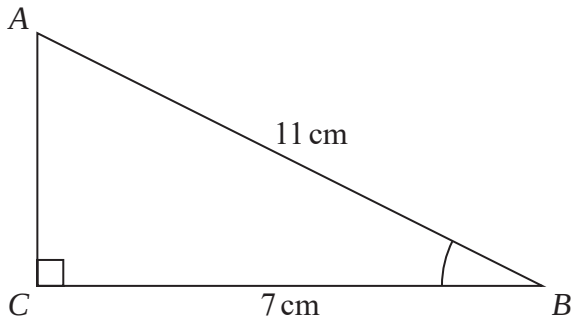
(b) Write your answer to part (a) correct to 2 decimal places.

.....

(1)

(Total for Question 23 is 3 marks)

23 *ABC* is a right-angled triangle.



(a) Work out the size of angle *ABC*.
Give your answer correct to 1 decimal place.

.....°

(2)

The length of the side *AB* is reduced by 1 cm.

The length of the side *BC* is still 7 cm.
Angle *ACB* is still 90°

(b) Will the value of cos *ABC* increase or decrease?
You must give a reason for your answer.

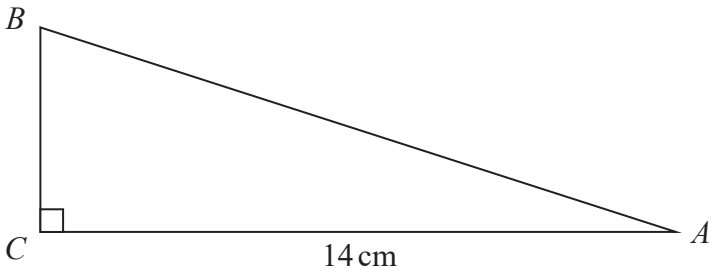
.....

.....

(1)

(Total for Question 23 is 3 marks)

25 ABC is a right-angled triangle.



$AC = 14$ cm.
Angle $C = 90°$

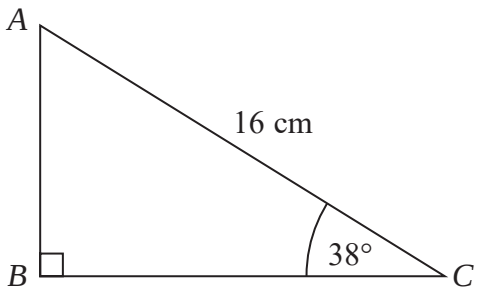
size of angle B : size of angle $A = 3 : 2$

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

.....cm

(Total for Question 25 is 4 marks)

24 *ABC* is a right-angled triangle.

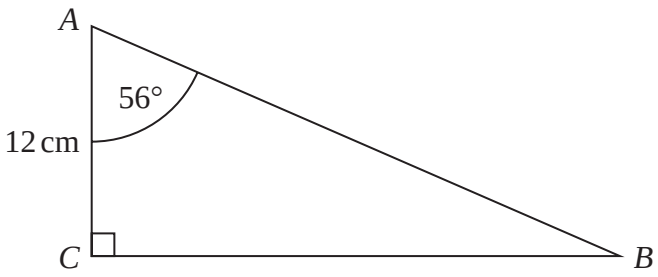


Calculate the length of *AB*.
Give your answer correct to 2 decimal places.

.....cm

(Total for Question 24 is 2 marks)

26 *ABC* is a right-angled triangle.

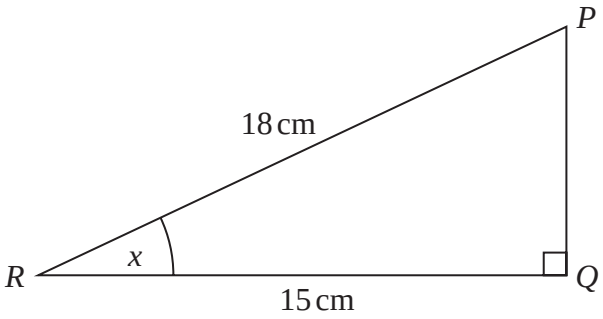


(a) Work out the length of *BC*.
Give your answer correct to 1 decimal place.

..... 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 26 is 4 marks)

30 Write down the value of sin 30°

.....

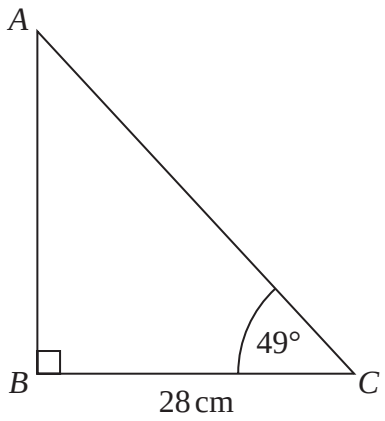
(Total for Question 30 is 1 mark)

30 Write down the exact value of $\cos 60°$

.....

(Total for Question 30 is 1 mark)

29 *ABC* is a right-angled triangle.

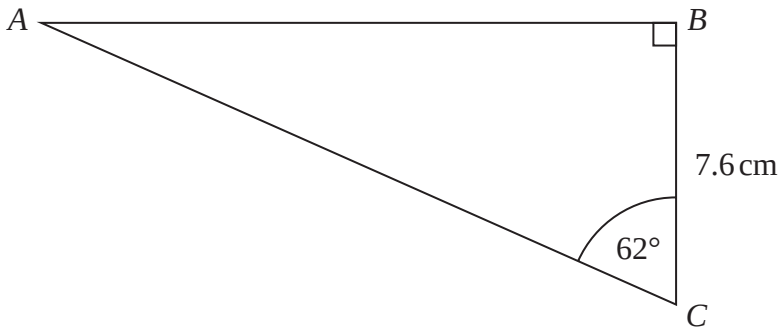


Calculate the length of *AB*.
Give your answer correct to 3 significant figures.

..... cm

(Total for Question 29 is 2 marks)

24 *ABC* is a right-angled triangle.



Calculate the length of *AB*.
Give your answer correct to 1 decimal place.

..... cm

(Total for Question 24 is 2 marks)