Write your name here

Surname	Other names

In the style of:

Edexcel GCSE

Centre Number	Candidate Number

Mathematics A

Trigonometry

Higher Tier

Past Paper Style Questions
Arranged by Topic

Paper Reference
1MA0/2H

You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser, calculator. Tracing paper may be used.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*
- **Calculators may be used.**

Information

- The total mark for this paper is 100
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed.

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ▶

1. ABC is a right-angled triangle. $AB = 18$ cm and $BC = 6$ cm.
The line BD bisects the angle ABC.

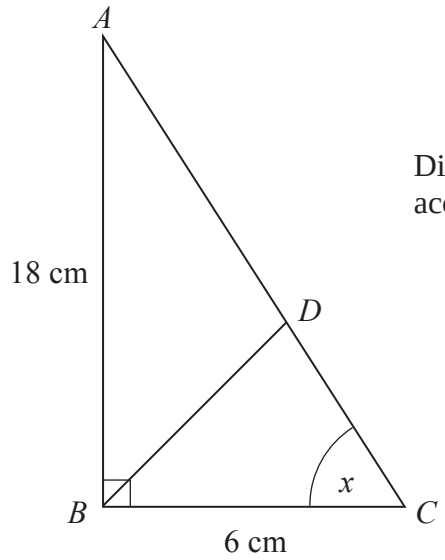


Diagram **NOT** accurately drawn

(a) Write down the value of tan x.

.....

(1)

(b) Calculate the length BD.

..... cm

(5)

(Total 6 marks)

2. Here is a right-angled triangle.

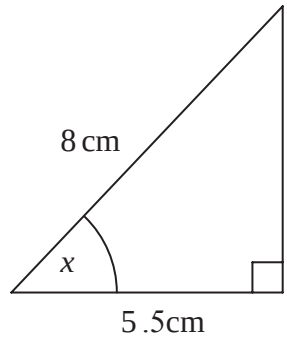


Diagram **NOT** accurately drawn

(a) Calculate the size of the angle marked x.
Give your answer correct to 1 decimal place.

x = ... °

(3)

Here is another right-angled triangle.

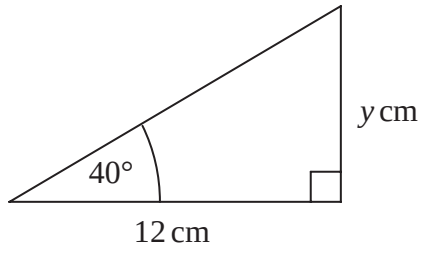


Diagram **NOT** accurately drawn

(b) Calculate the value of y.
Give your answer correct to 1 decimal place.

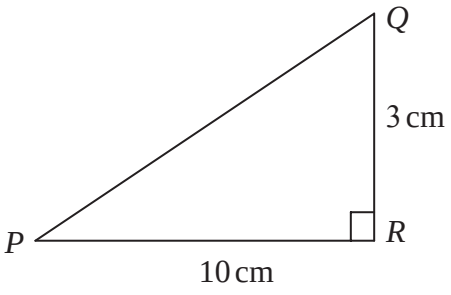
y = ...

(3)

(Total 6 marks)

3.

Diagram **NOT** accurately drawn



PQR is a right-angled triangle.

QR = 3 cm
PR = 10 cm

Work out the size of angle *RPQ*.
Give your answer correct to 3 significant figures.

.....°

(Total 3 marks)

4.

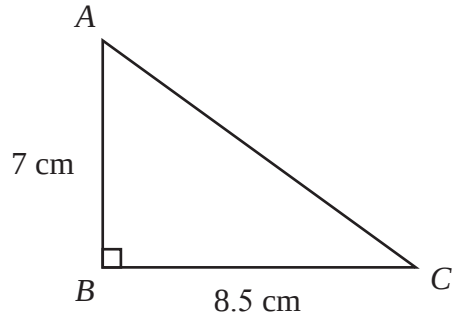


Diagram **NOT** accurately drawn

ABC is a right-angled triangle.
AB = 7 cm,
BC = 8.5 cm.

(a) Work out the area of the triangle.

..... cm^2
(2)

(b) Work out the length of *AC*.
Give your answer correct to 2 decimal places.

..... cm
(3)

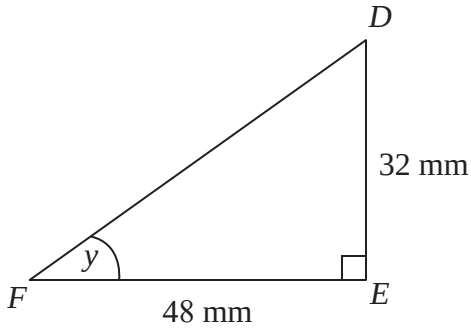


Diagram **NOT** accurately drawn

DEF is another right-angled triangle.
DE = 32 mm,
FE = 48 mm.

(c) Calculate the size of angle *y*.
Give your answer correct to 1 decimal place.

.....°

(3)

(Total 8 marks)

5.

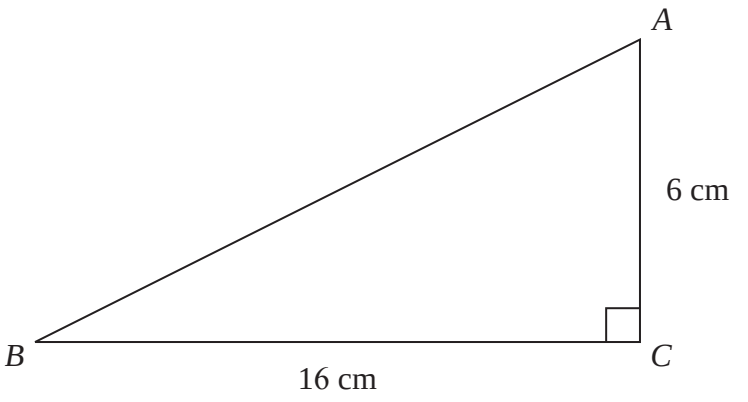


Diagram **NOT** accurately drawn

ABC is a right-angled triangle.
AC = 6 cm.
BC = 16 cm.

(a) Work out the area of triangle *ABC*.

..... cm^2
(2)

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

..... cm
(3)

(Total 5 marks)

6.

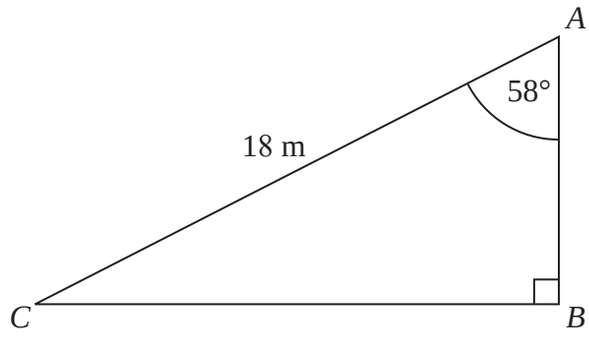


Diagram **NOT** accurately drawn

ABC is a right-angled triangle.
AC = 18 m.
Angle *CAB* = 58°

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

..... m

(Total 3 marks)

7.

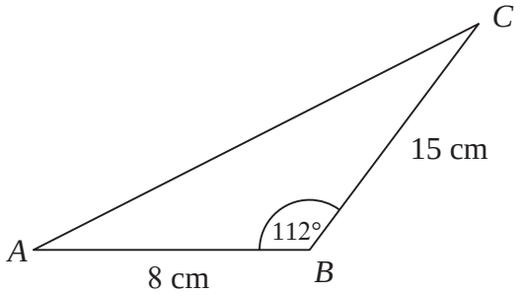


Diagram **NOT** accurately drawn

ABC is a triangle.
AB = 8 cm
BC = 15 cm
Angle *ABC* = 112°

Calculate the area of the triangle.
Give your answer correct to 3 significant figures.

..... cm^2

(Total 3 marks)

8. Town *B* is 4.6 km due West of town *C*.
Town *A* is 2.3 km due North of town *B*.

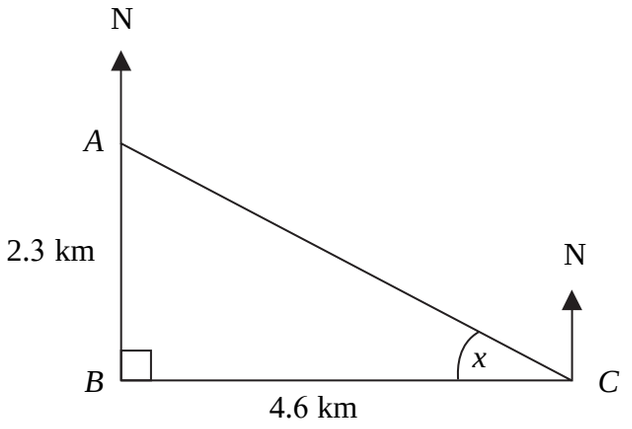


Diagram **NOT** accurately drawn

(a) Calculate the size of the angle marked *x*.
Give your answer correct to 3 significant figures.

x = ... °
(3)

(b) Find the bearing of town *C* from town *A*.
Give your answer correct to 3 significant figures.

..... °
(1)

(Total 4 marks)

9.

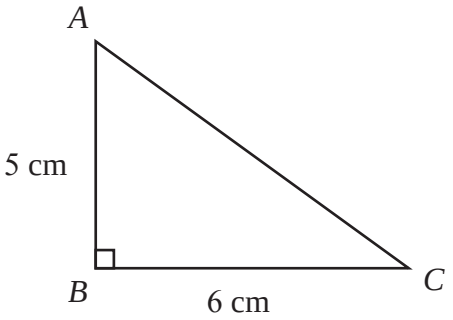


Diagram **NOT** accurately drawn

ABC is a right-angled triangle.
AB = 5 cm,
BC = 6 cm.

(a) Work out the area of the triangle.

..... cm^2
(2)

(b) Work out the length of *AC*.
Give your answer correct to 2 decimal places.

..... cm
(3)

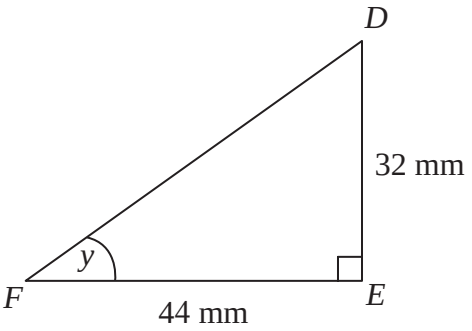


Diagram **NOT** accurately drawn

DEF is another right-angled triangle.
DE = 32 mm,
FE = 44 mm.

(c) Calculate the size of angle *y*.
Give your answer correct to 1 decimal place.

°

.....

(3)

(Total 8 marks)

10.

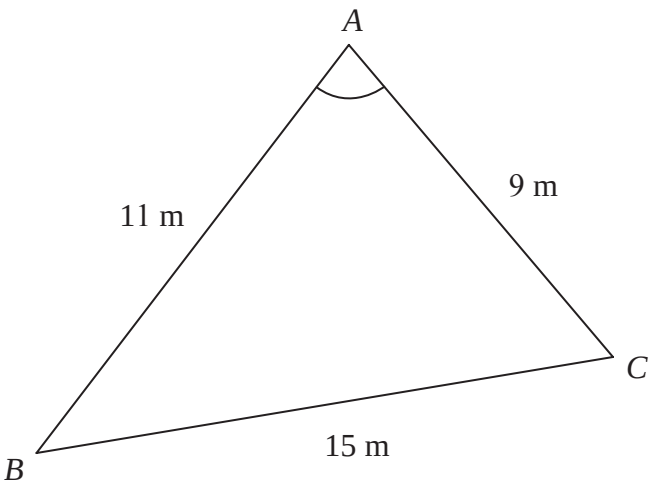


Diagram **NOT** accurately drawn

ABC is a triangle.
AB = 11 m.
AC = 9 m.
BC = 15 m.

Calculate the size of angle *BAC*.
Give your answer correct to one decimal place.

.....°

(Total 3 marks)

11.

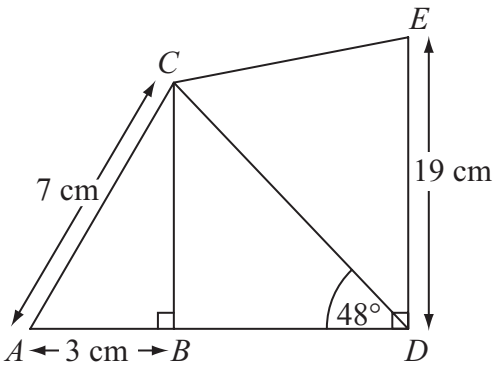


Diagram **NOT** accurately drawn

$AC = 7$ cm.
$AB = 3$ cm.
$DE = 19$ cm.
Angle ABC = angle CBD = angle $BDE = 90°$.
Angle $BDC = 48°$.

(a) Calculate the length of CD.
Give your answer correct to 3 significant figures.

..... cm
(4)

(b) Calculate the length of CE.
Give your answer correct to 3 significant figures.

..... cm
(3)

(Total 7 marks)

12

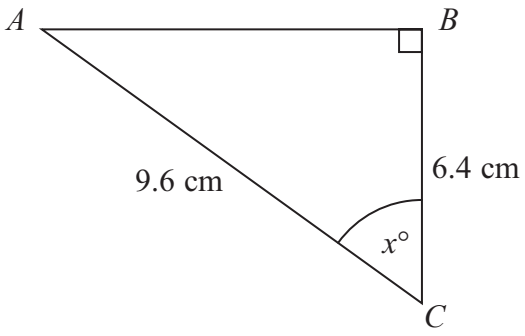


Diagram **NOT** accurately drawn

ABC is a right-angled triangle.
AC = 9.6 cm.
BC = 6.4 cm.

Calculate the size of the angle marked $x°$.
Give your answer correct to 1 decimal place.

.....°

(Total 3 marks)

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