

# Edexcel GCSE

## Mathematics (Linear) – 1MA0

# TRIGONOMETRY

### Materials required for examination

Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.  
Tracing paper may be used.

### Items included with question papers

Nil



### Instructions

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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

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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 – you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.

### Advice

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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.

1.

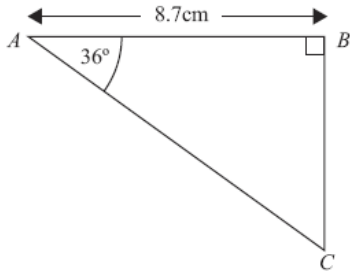


Diagram NOT accurately drawn

$ABC$  is a right-angled triangle.

Angle  $B = 90^\circ$ .

Angle  $A = 36^\circ$ .

$AB = 8.7$  cm.

Work out the length of  $BC$ .

Give your answer correct to 3 significant figures.

..... cm  
(3 marks)

2.

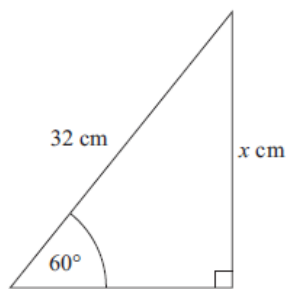


Diagram NOT accurately drawn

Calculate the value of  $x$ .

Give your answer correct to 3 significant figures.

.....  
(3 marks)

3.

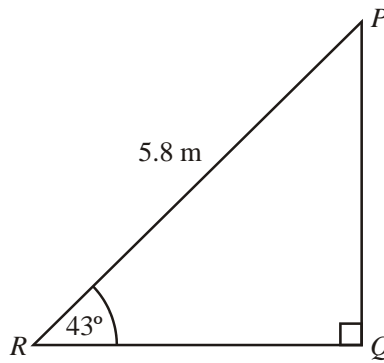


Diagram **NOT** accurately drawn

$PQR$  is a triangle.  
Angle  $Q = 90^\circ$ .  
Angle  $R = 43^\circ$ .  
 $PR = 5.8 \text{ m}$ .

Calculate the length of  $QR$ .  
Give your answer correct to 3 significant figures.

..... m

**(3 marks)**

4.

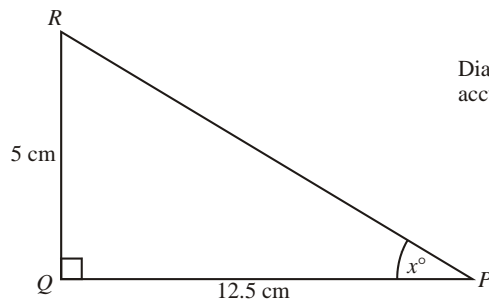


Diagram **NOT** accurately drawn

$PQR$  is a triangle.  
Angle  $PQR = 90^\circ$ .  
 $PQ = 12.5 \text{ cm}$ .  
 $QR = 5 \text{ cm}$ .

Calculate the value of  $x$ .  
Give your answer correct to 1 decimal place.

.....

**(3 marks)**

5.

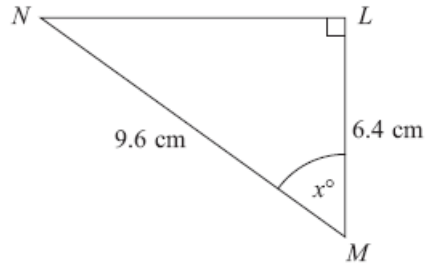


Diagram **NOT** accurately drawn

$LMN$  is a right-angled triangle.  
 $MN = 9.6 \text{ cm}$ .  
 $LM = 6.4 \text{ cm}$ .

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

.....<sup>o</sup>  
**(3 marks)**

6.

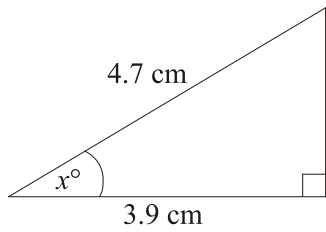


Diagram **NOT** accurately drawn

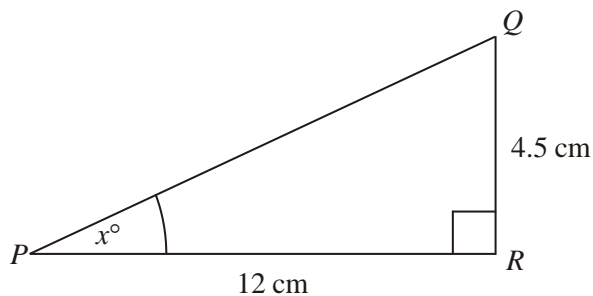
Work out the value of  $x$ .  
Give your answer correct to 1 decimal place.

$x = \dots\dots\dots$

(3 marks)

7.

Diagram **NOT**  
accurately drawn



$PQR$  is a right-angled triangle.

$PR = 12$  cm.

$QR = 4.5$  cm.

Angle  $PRQ = 90^\circ$ .

Work out the value of  $x$ .

Give your answer correct to one decimal place.

$x = \dots\dots\dots$

(3 marks)

8. Calculate the size of angle  $a$  in this right-angled triangle.  
Give your answer correct to 3 significant figures.

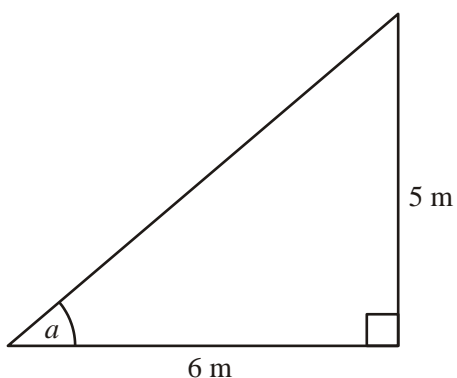


Diagram **NOT**  
accurately drawn

$\dots\dots\dots$

(3 marks)

9.  $PQR$  is a right-angled triangle.

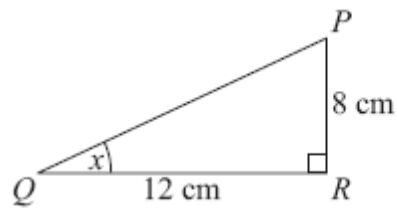


Diagram **NOT** accurately drawn

$PR = 8\text{ cm}$ .  
 $QR = 12\text{ cm}$ .

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

.....<sup>o</sup>  
**(3)**

$XYZ$  is a different right-angled triangle.

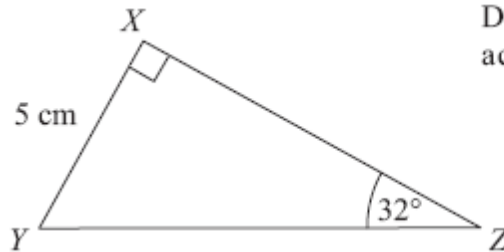


Diagram **NOT** accurately drawn

$XY = 5\text{ cm}$ .  
 Angle  $Z = 32^\circ$ .

- (b) Calculate the length  $YZ$ .  
 Give your answer correct to 3 significant figures.

..... cm  
**(3)**

**(6 marks)**

10. The diagram shows a quadrilateral  $ABCD$ .

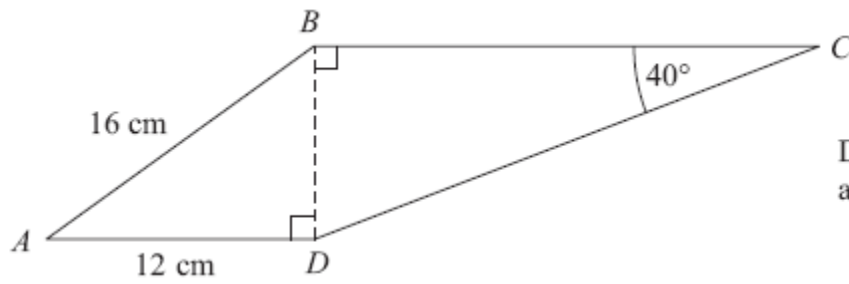


Diagram **NOT** accurately drawn

$AB = 16$  cm.

$AD = 12$  cm.

Angle  $BCD = 40^\circ$ .

Angle  $ADB = \text{angle } CBD = 90^\circ$ .

Calculate the length of  $CD$ .

Give your answer correct to 3 significant figures.

..... cm

(5 marks)

11.

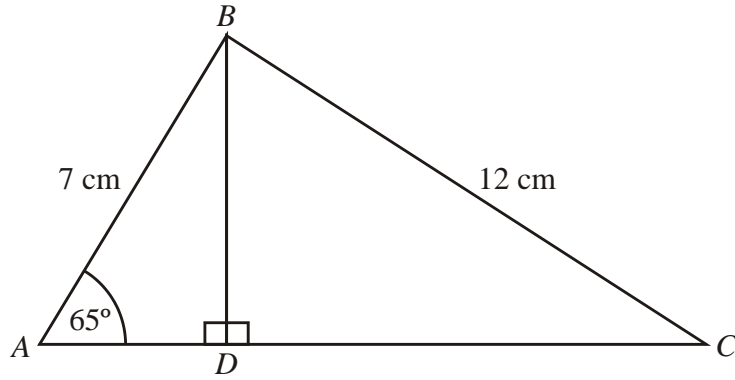


Diagram **NOT**  
accurately drawn

$ABC$  is a triangle.

$ADC$  is a straight line with  $BD$  perpendicular to  $AC$ .

$AB = 7$  cm.

$BC = 12$  cm.

Angle  $BAD = 65^\circ$ .

Calculate the length of  $AC$ .

Give your answer correct to 3 significant figures.

..... cm

**(6 marks)**