


Centre Number						Candidate Number				
Surname										
Other Names										
Candidate Signature										

For Examiner's Use	
Examiner's Initials	
Pages	Mark
3	
4 – 5	
6 – 7	
8 – 9	
10 – 11	
12 – 13	
14 – 15	
16 – 17	
TOTAL	

GCSE Mathematics (Calculator Paper)

Practice Paper Style Questions – Topic: Trigonometry (Higher Tier)

<p>For this paper you must have:</p> <ul style="list-style-type: none"> • black pen • HB pencil • ruler (with cm & mm) • rubber • protractor • compass • pencil sharpener • calculator 	
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Time allowed

- 1 hour

Instructions

- Use **black ink** or black ball-point pen. Draw diagrams in pencil.
- Fill in the boxes at the top of this page.
- Answer **all** questions.
- You must answer the questions in the space provided. Do not write outside the box around each page or on blank pages.
- Do all rough work in this book. Cross through any work that you do not want to be marked.

Information

- The marks for questions are shown in brackets.
- The maximum mark for this paper is **59**.
The quality of your written communication is specifically assessed in questions indicated with an asterisk (*)
- You may ask for more answer paper and graph paper.
These must be tagged securely to this answer booklet.
- A calculator **MAY** be used.

Advice

- Read each question carefully before you answer it.
- In all calculations, show clearly how you work out your answer.
- Check your answers if you have time at the end.

There are no questions printed on this page

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ANSWER IN THE SPACES PROVIDED**

1 XYZ is a right-angled triangle.

$XY = 18\text{cm}$ and $YZ = 6\text{cm}$.

The line YQ bisects the angle XYZ .

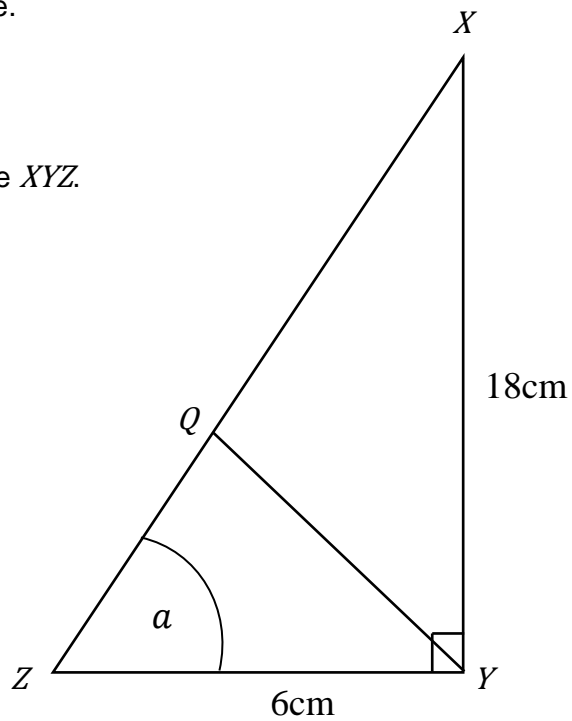


Diagram NOT
accurately drawn

(a) Write down the value of $\tan a$

Answer (1 mark)

(b) Calculate the length YQ

Answercm..... (5 marks)

2 Here is a right-angled triangle.

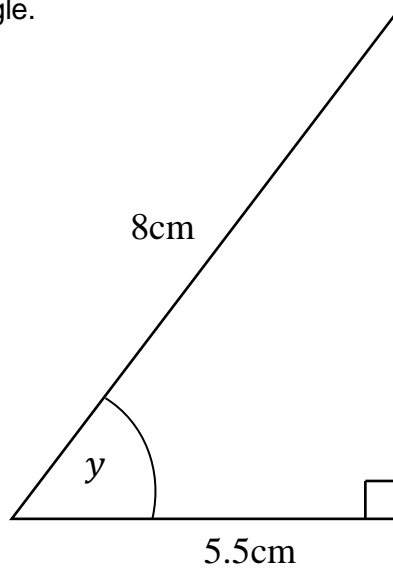


Diagram NOT
accurately drawn

(a) Calculate the size of the angle marked y .

Give your answer correct to one decimal place.

Answer $y = \dots\dots\dots^\circ \dots\dots$ (3 marks)

Here is another right-angled triangle.

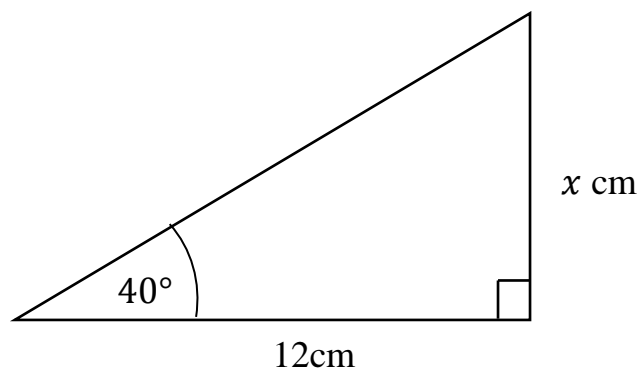


Diagram NOT
accurately drawn

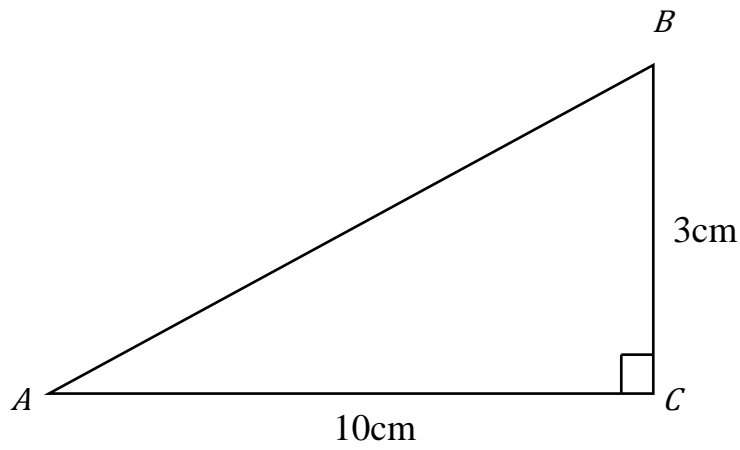
(b) Calculate the value of x

Give your answer correct to one decimal place.

Answer $x = \dots\dots\dots\text{cm} \dots\dots$ (3 marks)

3 ABC is a right-angled triangle.

Diagram NOT
accurately drawn



$$BC = 3\text{cm}$$

$$AC = 10\text{cm}$$

Work out the size of angle CAB .

Give your answer correct to three significant figures.

Answer °..... (3 marks)

4

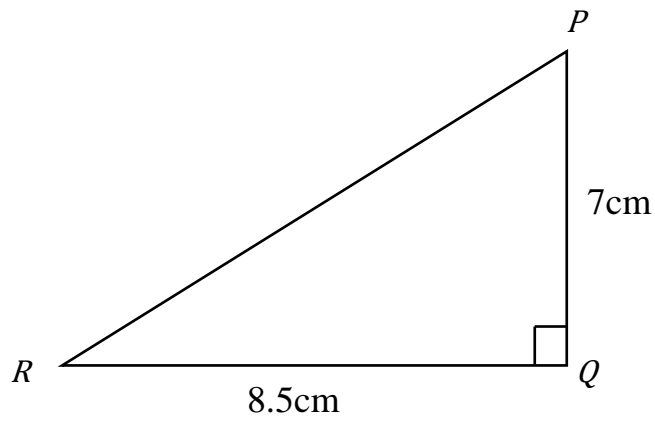


Diagram NOT
accurately drawn

PQR is a right-angled triangle.

$$PQ = 7\text{cm}$$

$$QR = 8.5\text{cm}$$

(a) Work out the area of the triangle.

Answer cm^2 (2 marks)

(b) Work out the length of PR .

Give your answer correct to 2 decimal places.

Answer cm (3 marks)

(c) ABC is another right-angled triangle.

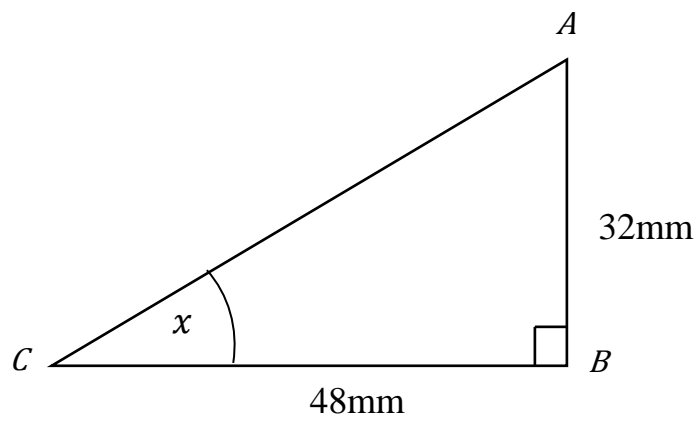


Diagram NOT
accurately drawn

$$AB = 32\text{mm}$$

$$CB = 48\text{mm}$$

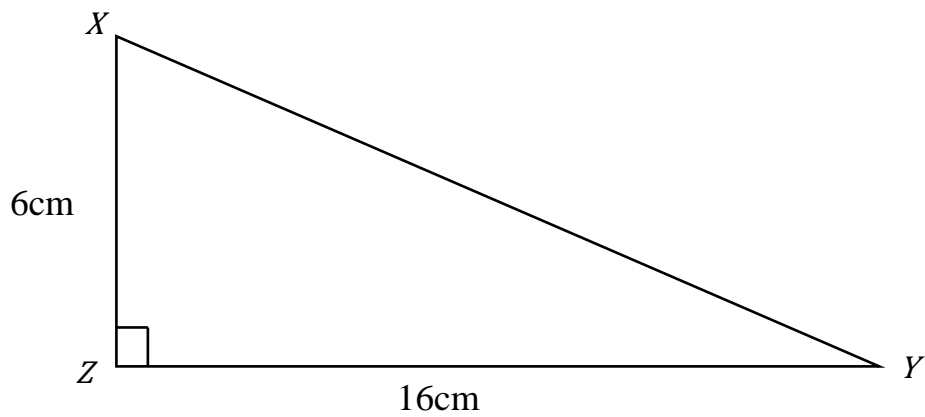
Calculate the size of angle x

Give your answer correct to one decimal place.

Answer $^{\circ}$ (3 marks)

5 XYZ is a right-angled triangle.

Diagram NOT
accurately drawn



$$XZ = 6\text{cm}$$

$$YZ = 16\text{cm}$$

(a) Work out the area of triangle XYZ .

Answer cm^2 (2 marks)

(b) Calculate the length of XY .

Give your answer correct to 2 decimal places.

Answer cm (3 marks)

6

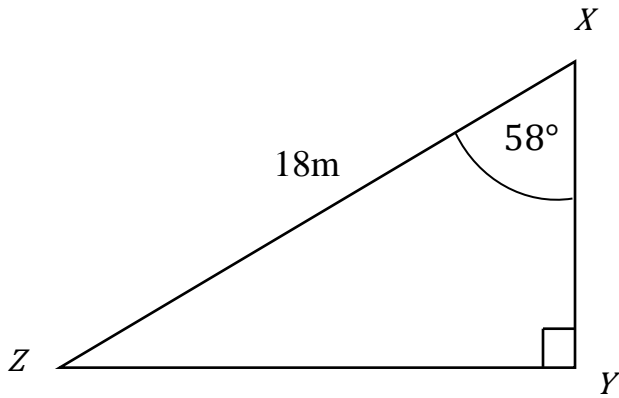


Diagram NOT
accurately drawn

XYZ is a right-angled triangle.

$XZ = 18\text{m}$

Angle $ZXY = 58^\circ$

Calculate the length of XY .

Give your answer correct to three significant figures.

Answerm..... (3 marks)

7

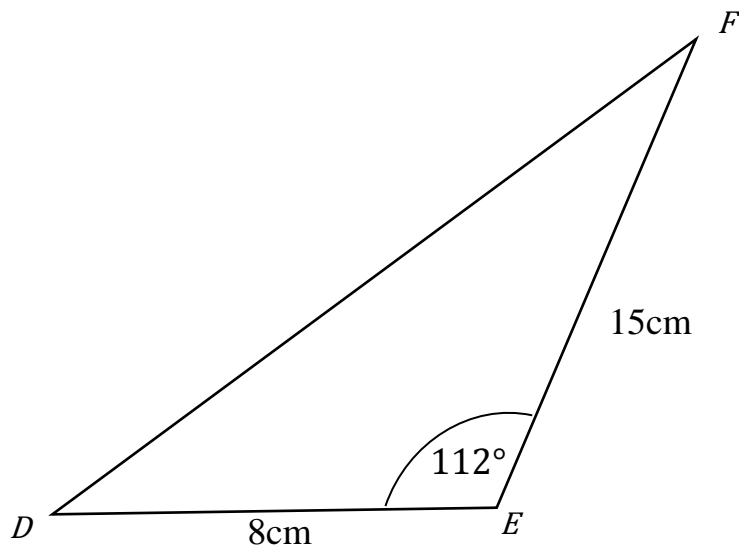


Diagram NOT
accurately drawn

DEF is a triangle.

$DE = 8\text{cm}$

$EF = 15\text{cm}$

Angle $DEF = 112^\circ$

Calculate the area of the triangle.

Give your answer correct to three significant figures.

Answer cm^2 (3 marks)

8 Town Y is 4.6km due West of Town Z.

Town X is 2.3km due North of Town Y.

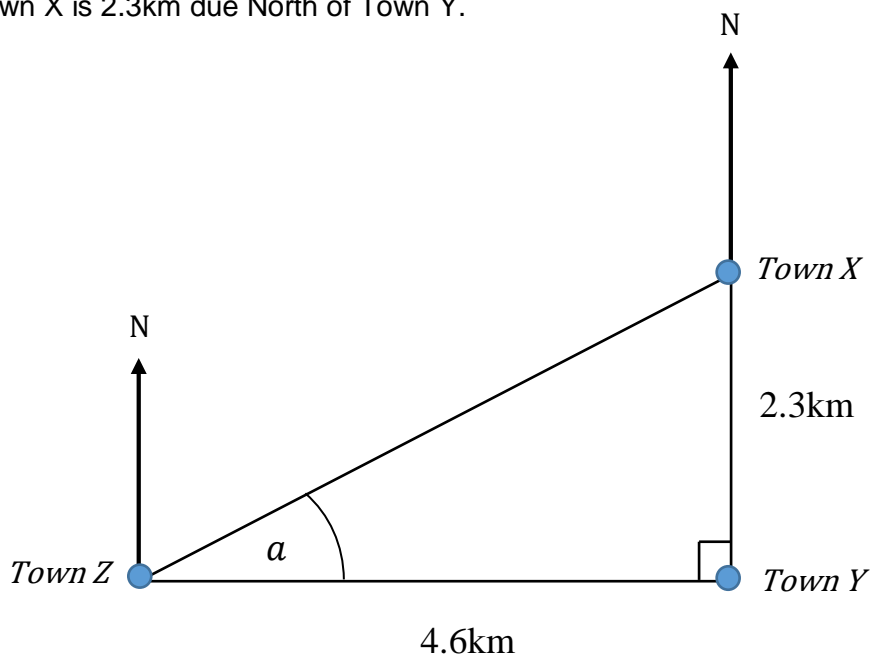


Diagram NOT
accurately drawn

(a) Calculate the size of the angle marked a .

Give your answer correct to three significant figures.

Answer $^{\circ}$ (3 marks)

(b) Find the bearing of Town Z from Town X.

Give your answer correct to three significant figures.

Answer $^{\circ}$(1 mark)

- 9 XYZ is a right-angled triangle.

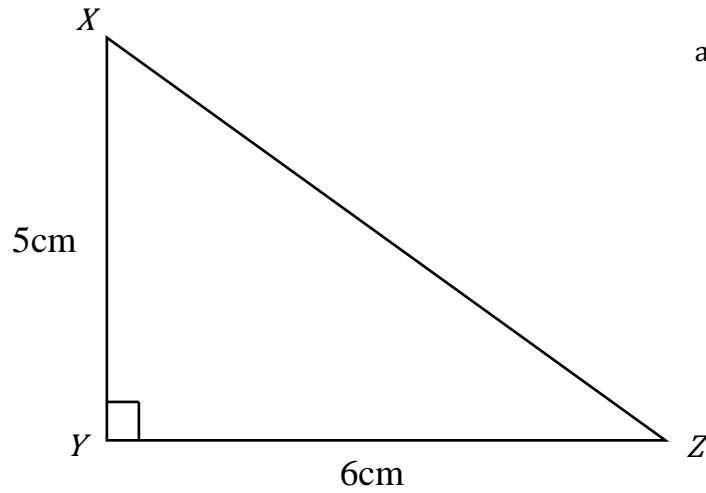


Diagram NOT
accurately drawn

$$XY = 5\text{cm}$$

$$YZ = 6\text{cm}$$

- (a) Work out the area of the triangle.

Answer cm^2 (2 marks)

- (b) Calculate the length of XZ .

Give your answer correct to 2 decimal places.

Answer cm (3 marks)

(c) ABC is another right-angled triangle.

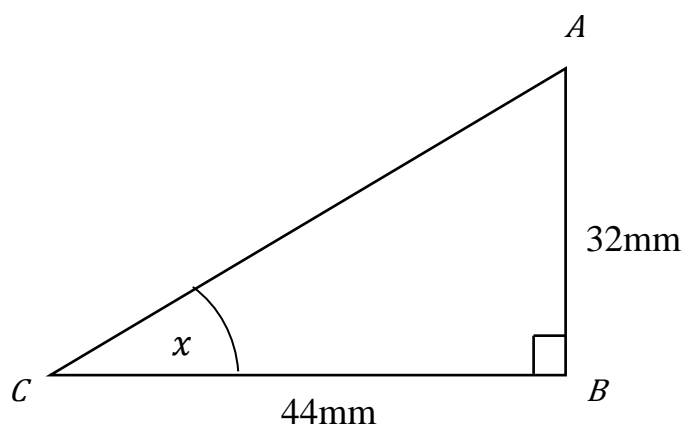


Diagram NOT
accurately drawn

$$AB = 32\text{mm}$$

$$CB = 44\text{mm}$$

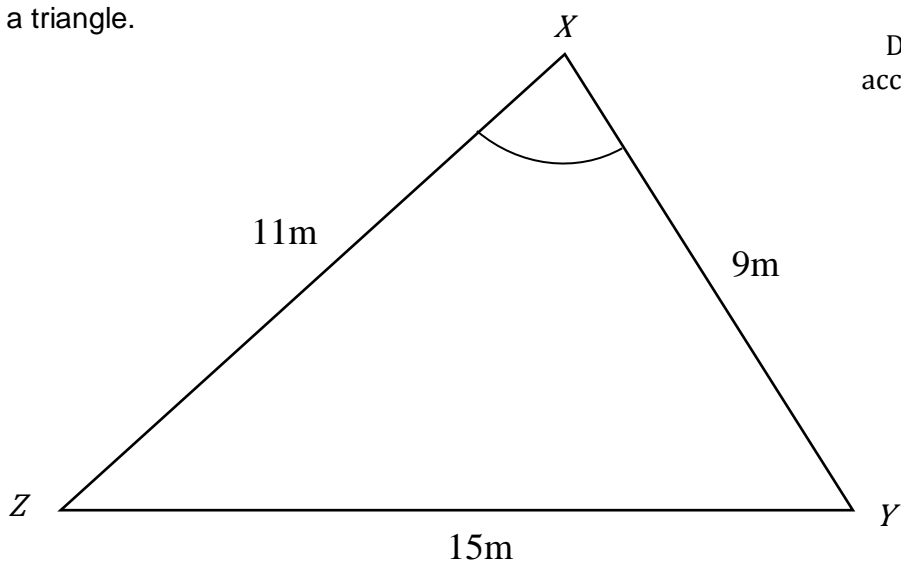
Calculate the size of angle x

Give your answer correct to one decimal place.

Answer °..... (3 marks)

10 XYZ is a triangle.

Diagram NOT
accurately drawn



$$XZ = 11\text{m}$$

$$XY = 9\text{m}$$

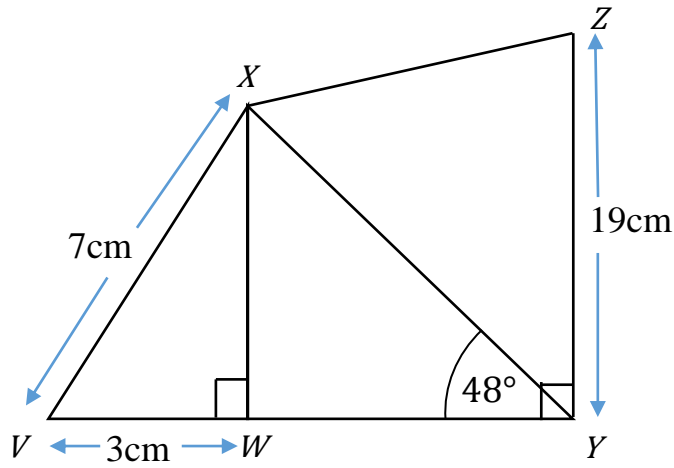
$$ZY = 15\text{m}$$

Calculate the size of angle ZXY .

Give your answer correct to one decimal place.

Answer $^{\circ}$ (3 marks)

11

Diagram NOT
accurately drawn

$$VX = 7\text{ cm}$$

$$VW = 3\text{ cm}$$

$$YZ = 19\text{ cm}$$

$$\text{Angle } VWX = \text{Angle } XWY = \text{Angle } WYZ = 90^\circ$$

(a) Calculate the length of XY .

Give your answer correct to 3 significant figures.

Answercm..... (4 marks)

(b) Calculate the length of XZ .

Give your answer correct to 3 significant figures.

Answercm..... (3 marks)

12 DEF is a right-angled triangle.

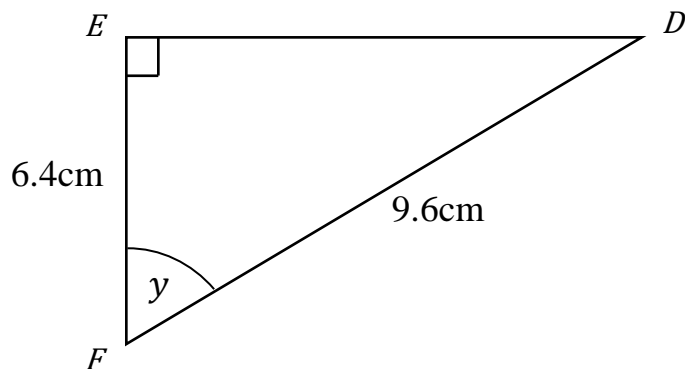


Diagram NOT
accurately drawn

$$DF = 9.6\text{cm}$$

$$EF = 6.4\text{cm}$$

Calculate the size of angle y

Give your answer correct to one decimal place.

Answer $^{\circ}$ (3 marks)

END OF QUESTIONS

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**DO NOT WRITE ON THIS PAGE
ANSWER IN THE SPACES PROVIDED**

