

Name

Class



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# Trigonometry

(9 – 1) Topic booklet

These questions have been collated from previous years GCSE Mathematics papers.

**You must have:** Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser.

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.*
- Diagrams are NOT accurately drawn, unless otherwise indicated.
- You must **show all your working out.**
- If the question is a **1F** question you are not allowed to use a calculator.
- If the question is a **2F** or a **3F** question, you may use a calculator to help you answer.

## Information

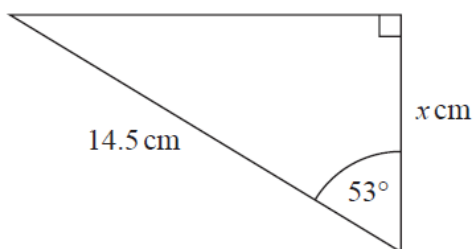
- The marks for **each** question are shown in brackets  
– *use this as a guide as to how much time to spend on each question.*

## 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.

**Answer ALL questions**  
**Write your answers in the space provided.**  
**You must write down all the stages in your working.**

22



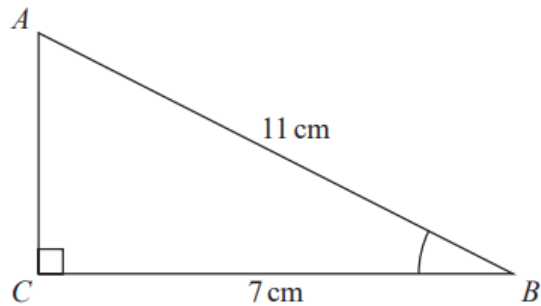
Work out the value of  $x$ .  
Give your answer correct to 3 significant figures.

$x = \dots\dots\dots$

November 2022 – 2F

**(Total for Question 22 is 2 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  $1\text{ cm}$ .

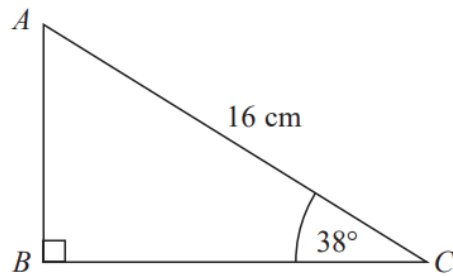
The length of the side  $BC$  is still  $7\text{ cm}$ .

Angle  $ACB$  is still  $90^\circ$

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

.....  
(1)

24  $ABC$  is a right-angled triangle.

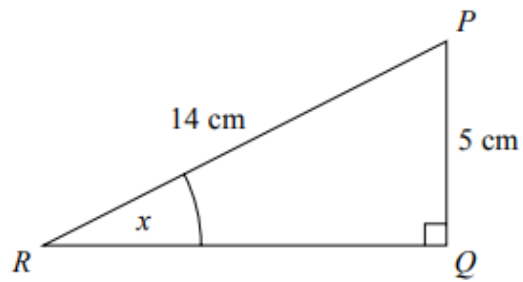


Calculate the length of  $AB$ .

Give your answer correct to 2 decimal places.

.....cm

24  $PQR$  is a right-angled triangle.

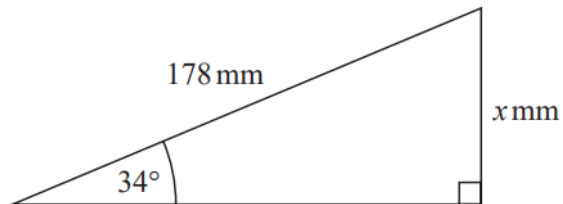


Work out the size of the angle marked  $x$ .  
Give your answer correct to 1 decimal place.

Sample 1 – Paper 2F

(Total for Question 24 is 2 marks)

25

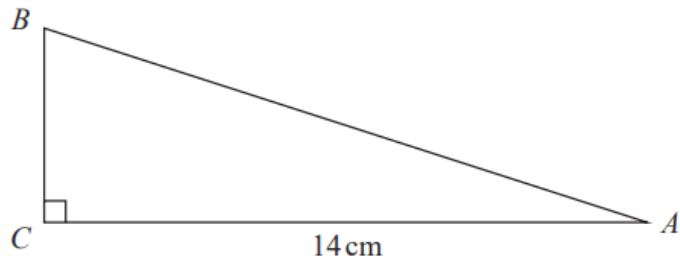


Work out the value of  $x$ .  
Give your answer correct to 1 decimal place.

May 2020 – Paper 2F

(Total for Question 25 is 2 marks)

25  $ABC$  is a right-angled triangle.



$AC = 14$  cm.

Angle  $C = 90^\circ$

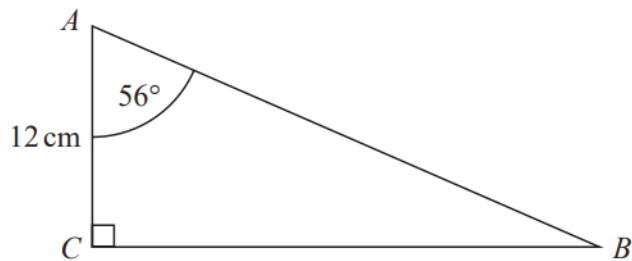
size of angle  $B$  : size of angle  $A = 3 : 2$

Work out the length of  $AB$ .

Give your answer correct to 3 significant figures.

.....cm

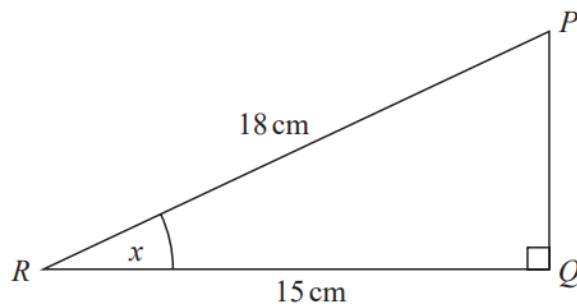
26  $ABC$  is a right-angled triangle.



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

..... cm  
(2)

$PQR$  is a right-angled triangle.



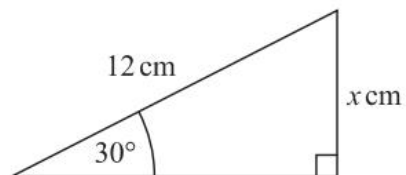
- (b) Work out the size of the angle marked  $x$ .  
Give your answer correct to 1 decimal place.

.....  
(2)

26 (a) Write down the exact value of  $\cos 30^\circ$

.....  
(1)

(b)



Given that  $\sin 30^\circ = 0.5$ ,  
work out the value of  $x$ .

.....  
(2)

Specimen 1 – Paper 1F

**(Total for Question 26 is 3 marks)**