

Name

Class



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Trig identities

(9 – 1) Topic booklet

HIGHER

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

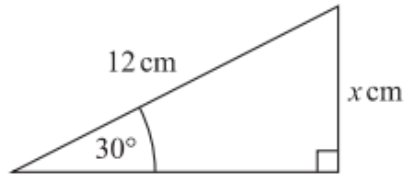
Write your answers in the space provided.

You must write down all the stages in your working.

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

.....
(1)

- (b)



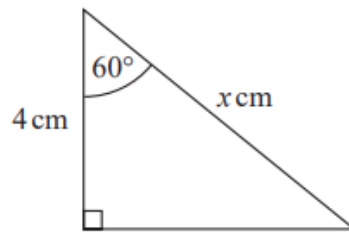
Given that $\sin 30^\circ = 0.5$,
work out the value of x .

.....
(2)

8 (a) Write down the exact value of $\tan 45^\circ$

.....
(1)

Here is a right-angled triangle.



$$\cos 60^\circ = 0.5$$

(b) Work out the value of x .

.....
(2)

- 14** Find the exact value of $\tan 30^\circ \times \sin 60^\circ$
Give your answer in its simplest form.

20 The table shows some values of x and y that satisfy the equation $y = a \cos x^\circ + b$

x	0	30	60	90	120	150	180
y	3	$1 + \sqrt{3}$	2	1	0	$1 - \sqrt{3}$	-1

Find the value of y when $x = 45$