Trigonometry – Common Values

Please write clearly in block capitals

Forename:
Surname:

Materials

For this paper you must have:
• mathematical instruments

You must **not** use a calculator.

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 spaces 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 you do not want to be marked.

Information

• The marks for questions are shown in brackets.
• You may ask for graph paper, tracing paper and more answer paper. These must be tagged securely to this answer book.

Advice

• In all calculations, show clearly how you work out your answer.

1   Calculate the following,   *(Level 5)*

1(a)
$$\cos(30°) + \sin(60°)$$

[2 marks]

_____

_____

Answer _____

1(b)
$$12\cos(60°) - 8\sin(30°)$$

[2 marks]

_____

_____

Answer _____

1(c)
$$\frac{\tan(45°)}{\sin(30°)} \times 10\tan(60°)$$

[2 marks]

_____

_____

Answer _____

1(d)
$$\tan(30°) + \sin(60°)$$

[2 marks]

_____

_____

Answer _____

Turn over for next question

8

Turn over ►

2   Calculate the following   *(Level 6)*

2(a) $$\tan(30°) + \sin(30°)$$

[2 marks]

Answer _____

2(b) $$\frac{\tan(45°) + \sin(30°)}{\tan(60°)} \times \cos(45°)$$

[3 marks]

Answer _____

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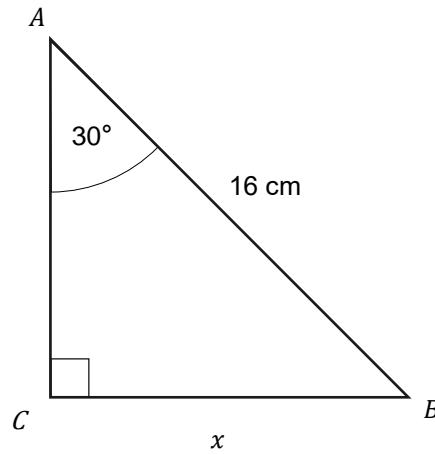
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5

Turn over ▶

3 ABC is a right-angled triangle.   *(Level 6)*

∠BAC is 30°

AB = 16 cm

A

30°

16 cm

C

x

B

Not drawn
accurately

Find the exact value of x.

Show all your workings.

[2 marks]

_____

_____

_____

_____
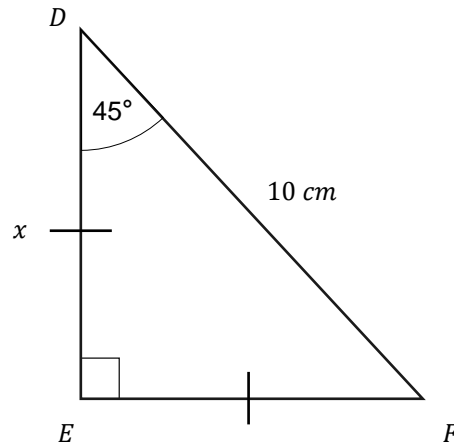
_____

_____

Answer _____

2

Turn over ►

4 DEF is a right-angled triangle *(Level 6)*

$DE = EF$

$\angle EDF = 45°$

Not drawn accurately

Find the exact value of the length x

Show all your workings.

[2 marks]

_____
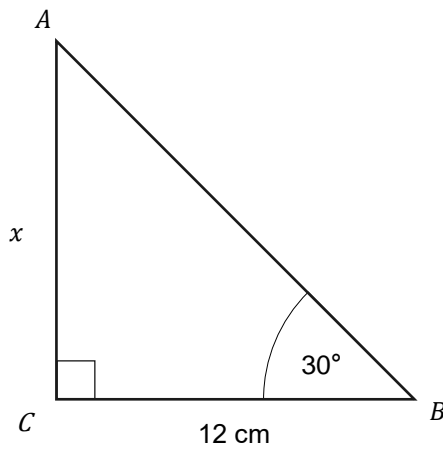
_____

_____

_____

_____

Answer _____ cm

Turn over for next question

2

Turn over ►

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5 ABC is a right-angled triangle.

$\angle ABC$ is 30°

CB = 12 cm

(Level 6)

Not drawn
accurately

Find the exact value of x.

Show all your workings.

[2 marks]

_____

_____

_____

_____

_____

_____

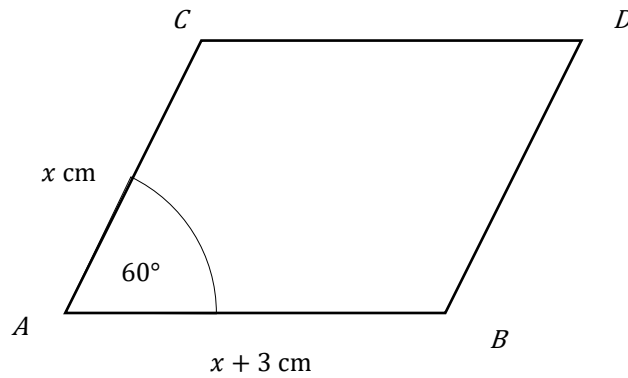Answer _____

2

Turn over ►

6 Below is a parallelogram *(Level 7)*

$AC = x$

$AB = x + 3$

Not drawn
accurately

The area of the parallelogram is $20\sqrt{3}$

Find the value of x

[4 marks]

Answer _____

End of Questions

4

END

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