1.5 Pure: Trigonometry: 10-minute Pack

EDEXCEL 9MA0 · Calculator allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

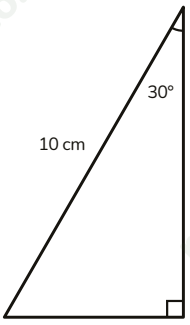
1 Convert 60 degrees to radians, giving your answer in terms of π.

(Total for Question 1 is 1 mark)

2 Write down the exact value of sin(30 degrees).

(Total for Question 2 is 1 mark)

3 A right-angled triangle has hypotenuse 10 cm and one angle of 30 degrees. Find the length of the side opposite this angle.



(Total for Question 3 is 1 mark)

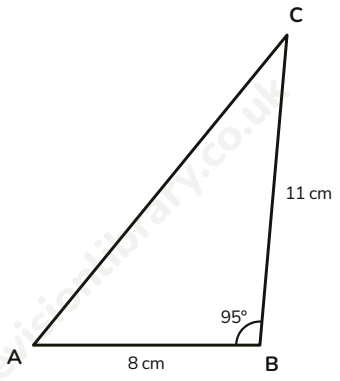
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4 Solve cos(x) = 0.5 for 0 degrees ≤ x ≤ 360 degrees, giving all solutions.

(Total for Question 4 is 2 marks)

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5 In triangle ABC, AB = 8 cm, BC = 11 cm and angle ABC = 95 degrees. Calculate the length of AC, giving your answer to 3 significant figures.



(Total for Question 5 is 3 marks)

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Mark scheme · 1.5 Pure: Trigonometry: 10-minute Pack

Question 1

π/3 cao	**B1**

Answer: π/3

Question 2

1/2 cao	**B1**

Answer: 1/2

Question 3

5 cm cao	**B1**

Answer: 5 cm

Question 4

finds the principal value, 60 degrees	**M1**
x = 60 and x = 300 degrees, both correct, no extras	**A1**

Answer: x = 60 degrees, 300 degrees

Question 5

correct statement of the cosine rule, $AC^2 = AB^2 + BC^2 - 2(AB)(BC)\cos(ABC)$	**M1**
correct substitution: $AC^2 = 8^2 + 11^2 - 2(8)(11)\cos(95)$	**M1**
AC = awrt 14.2 cm cao	**A1**

Answer: AC = 14.2 cm (3 s.f.)

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