HIGHER

7.12 The Sine Rule: 10-minute Pack

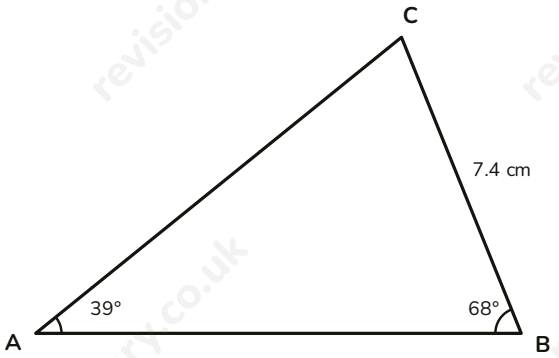
EDEXCEL 1MA1 · Calculator allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 In triangle ABC, angle A = 39 degrees, angle B = 68 degrees, and BC = 7.4 cm (BC is opposite angle A). Calculate the length of AC (opposite angle B). Give your answer correct to 3 significant figures.

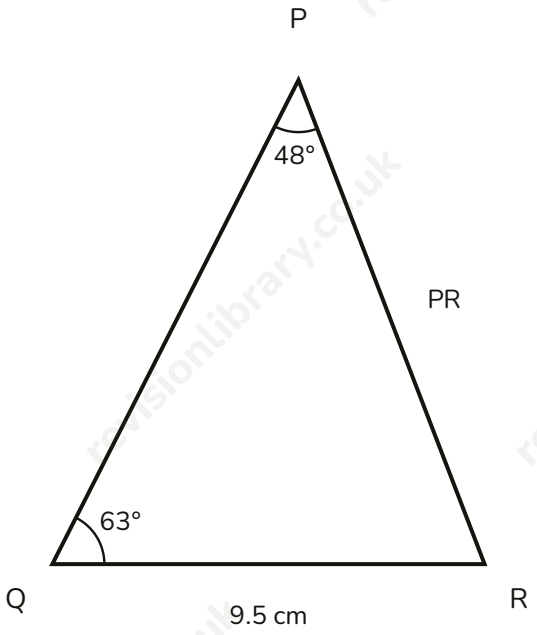


(Total for Question 1 is 2 marks)

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2 In triangle PQR, angle P = 48 degrees, angle Q = 63 degrees and QR = 9.5 cm (QR is opposite angle P). Calculate the length of PR (opposite angle Q). Give your answer correct to 3 significant figures.

Diagram NOT accurately drawn

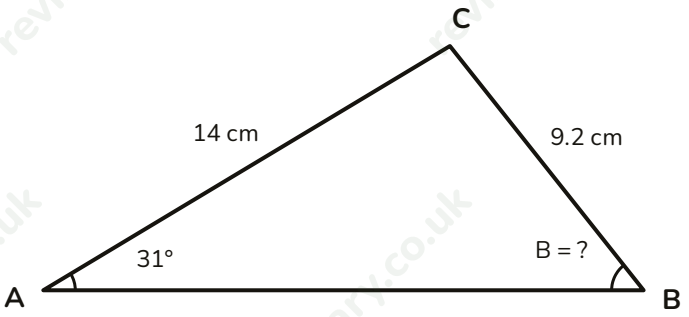


(Total for Question 2 is 3 marks)

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3 In triangle ABC, angle A = 31 degrees, BC = 9.2 cm and AC = 14 cm. Angle B is acute. Work out the size of angle B. Give your answer correct to 1 decimal place.

Diagram NOT accurately drawn



(Total for Question 3 is 3 marks)

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Mark scheme · 7.12 The Sine Rule: 10-minute Pack

Question 1

AC/sin(68) = 7.4/sin(39) oe	**M1**
awrt 10.9 (cm)	**A1**

Answer: AC = 10.9 cm (3 s.f.)

Question 2

PR/sin63 = 9.5/sin48 oe	**M1**
PR = 9.5 x sin63 / sin48	**M1**
11.4 cm awrt	**A1**

Answer: 11.4 cm (3 sf)

Question 3

sin B/14 = sin 31/9.2	**M1**
sin B = 0.7838 or equivalent	**M1**
51.6 degrees cao	**A1**

Answer: 51.6 degrees

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