

IB Math SL 1 - Triangle Trigonometry IB Packet

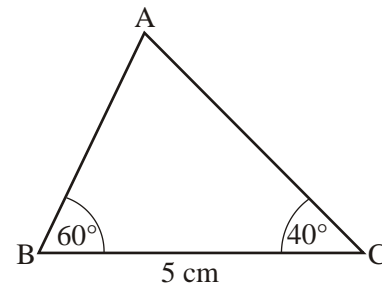
Name _____

Note: Calc: ALL

1. A triangle has sides of length 4, 5, 7 units. Find, to the nearest tenth of a degree, the size of the largest angle. (Total 4 marks)

2. The following diagram shows a triangle ABC, where $BC = 5$ cm, $\hat{B} = 60^\circ$, $\hat{C} = 40^\circ$.

- (a) Calculate AB.
(b) Find the area of the triangle.



(Total 5 marks)

3. Two boats A and B start moving from the same point P. Boat A moves in a straight line at 20 km h^{-1} and boat B moves in a straight line at 32 km h^{-1} . The angle between their paths is 70° .

Find the distance between the boats after 2.5 hours.

(Total 5 marks)

4. In the triangle ABC, $\hat{A} = 30^\circ$, $BC = 3$ and $AB = 5$. Find the value of \hat{B} .

(Total 6 marks)

5.

In triangle PQR, PQ is 10 cm, QR is 8 cm and angle PQR is acute. The area of the triangle is 20 cm^2 . Find the size of angle PQR.

(Total 6 marks)

Answers

1. $\alpha = 101.5^\circ$ (or $\alpha = 101.6^\circ$)
2. (a) $AB = 3.26$ cm
(b) 7.07 (accept 7.06) cm^2
3. 78.5 km
4. $\hat{B} = 93.6^\circ$ or 26.4°
5. $\hat{PQR} = 30^\circ$