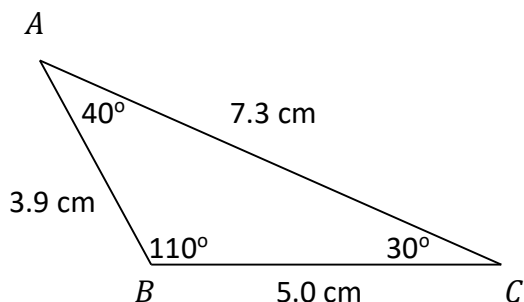


Unit 5: Non-Right Triangle Trigonometry

5.2 The Sine Law

Consider $\triangle ABC$.

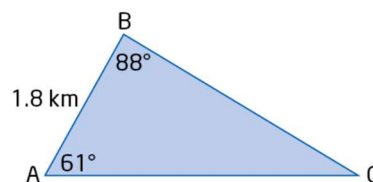
For each angle calculate the ratio of the sine of the angle to the length of the side opposite.



The **sine law** is a relationship between the sides and angles in any triangle. Let $\triangle ABC$ be any triangle, where a , b , and c represent the measures of the sides opposite $\angle A$, $\angle B$, and $\angle C$, respectively.

ex. For the diagram given:

a) Determine the distance b .

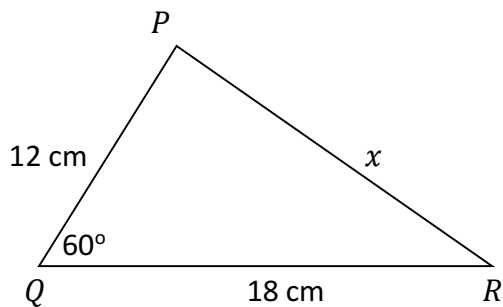


b) Determine the distance a .

ex. In $\triangle PQR$, $\angle P = 36^\circ$, $p = 24.8$ m, and $q = 23.4$ m. Determine the measure of $\angle R$, to the nearest degree.

ex. Solve $\triangle LMN$, $\angle L = 64^\circ$, $l = 25.2$ cm, and $m = 16.5$ cm. Side lengths to the tenth and angle measures to the nearest degree.

ex. In the triangle shown, can the sine law be used to determine the value of x ? $\angle P$? $\angle R$? Explain.



Practice: pg. 108/ # 1ac, 2, 3, 4ab, 5ab, 10, 12, 13, 15, 24abc



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