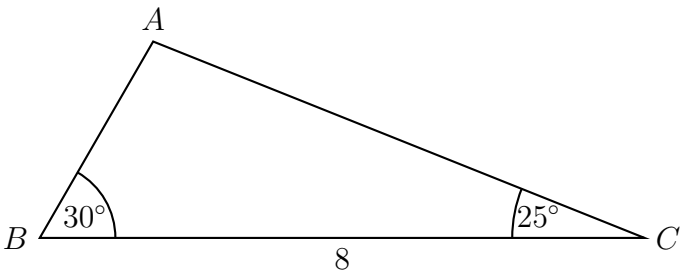
BECA / IB Math 6 Geometry Name:
17 March 2022

6.3 The Law of Sines

1. The following diagram shows triangle ABC, with $A\hat{B}C = 60°$, $A\hat{C}B = 25°$, and $BC = 8$ cm.

   Find AB.

   diagram not to scale

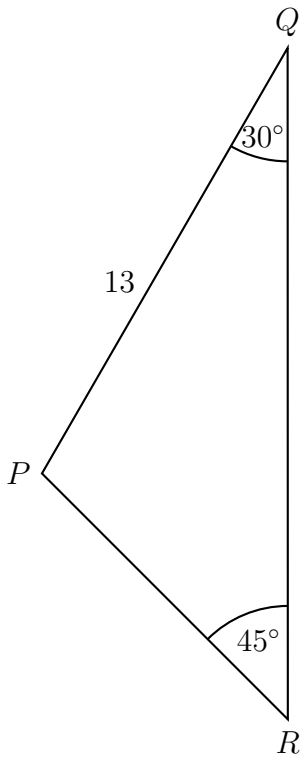


2. The following diagram shows triangle PQR.

   $Q\hat{R}P = 45°$, $P\hat{Q}R = 30°$, and $PQ = 13$ cm.

   Find PR.

   diagram not to scale

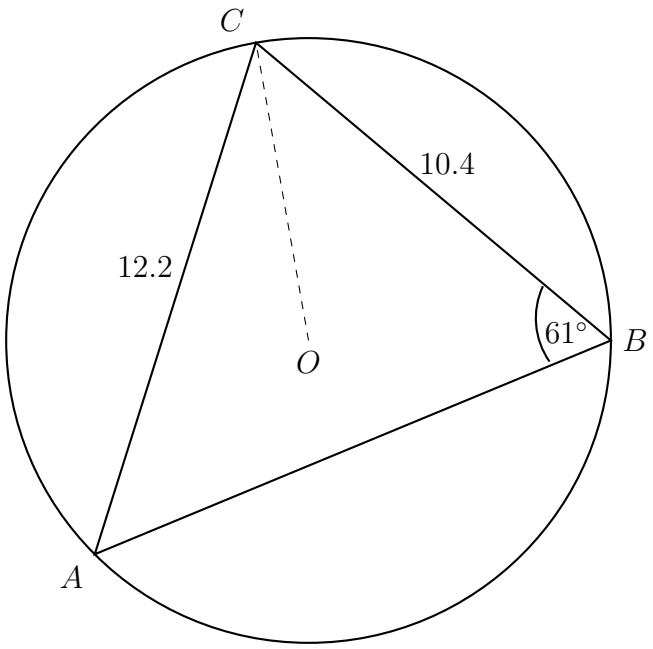


3. Consider a circle with centre O and radius 7 cm. Triangle ABC is drawn such that its vertices are on the circumference of the circle.

   $AB = 12.2$ cm, $BC = 10.4$ cm, and $A\hat{C}B = 61°$.

   Find $B\hat{A}C$.

diagram not to scale

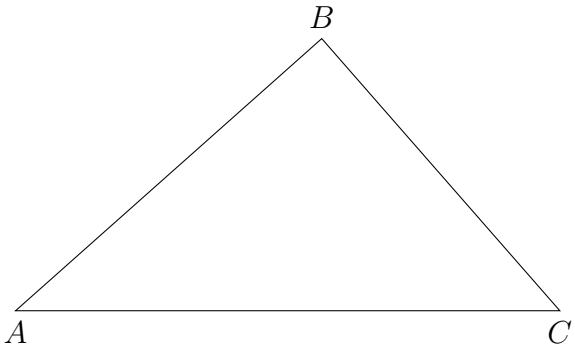


BECA / IB Math 6 Geometry Name:
17 March 2022

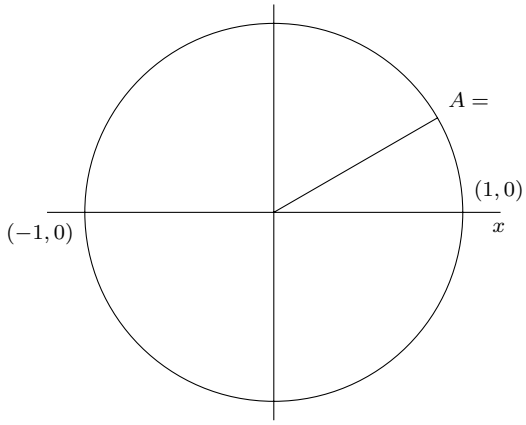
4. Triangle ABC has $\hat{A} = 40°$, $AB = 7$ cm, $BC = 6$ cm. Find the measure of $\hat{C}$:

   (a) Write down the law of sines, substituting appropriate values.

   (b) Solve for the measure of angle C



5. Given a circle with radius of one, centered on the origin. An angle with measure 30° is placed in standard position. Mark the point A, the intersection of the circle and angle ray, as an ordered pair.



   (a) Write down the value of $\sin 30°$

   (b) Write down the value of $\cos 30°$