

Name:

15.2 Classwork: The law of sines

HSG.SRT.D.11

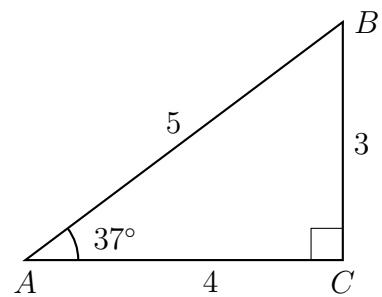
Formulas

Sine rule: $\frac{a}{\sin A} = \frac{b}{\sin B}$

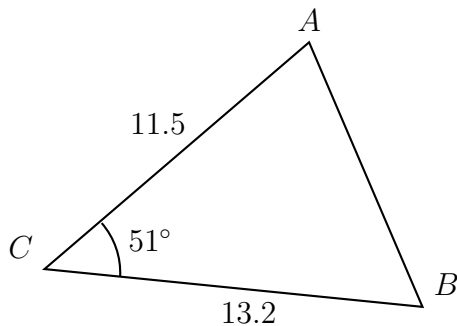
Area of a right triangle: $A = \frac{1}{2}(bh)$, where b is the base, h is the height

Area of any triangle: $A = \frac{1}{2}ab \sin C$

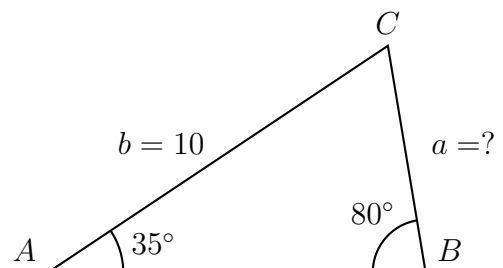
1. Find the area of right $\triangle ABC$ shown below.



2. Find the area of the given triangle.



3. (a) Substitute given values into the Sine rule.

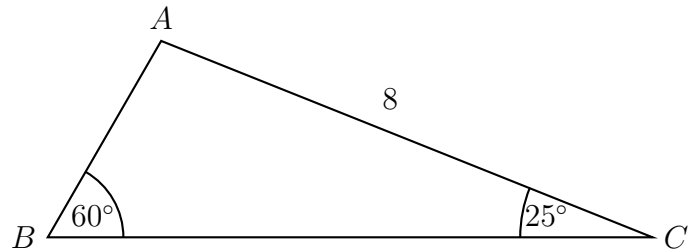


- (b) Solve for the missing length a .

4. The following diagram shows triangle ABC , with $\hat{A}BC = 60^\circ$, $\hat{A}CB = 25^\circ$, and $AC = 8$ cm.

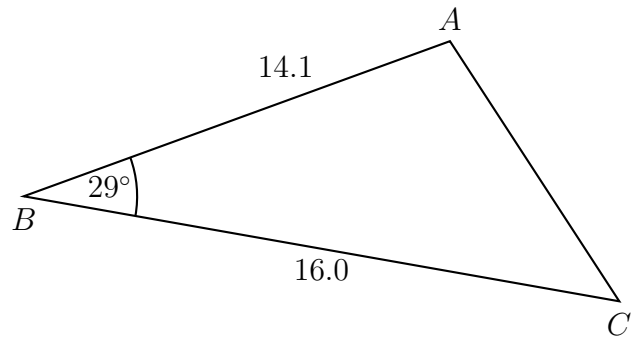
Find AB .

diagram not to scale



5. As shown in the diagram, triangle ABC has $\hat{A}BC = 29^\circ$, $AB = 14.1$, and $BC = 16.0$. Find the area of the triangle.

diagram not to scale



6. The following diagram shows triangle ABC , with $\hat{A}BC = 48^\circ$, $\hat{A}CB = 37^\circ$, and $AB = 11.5$ cm.

Find AC .

diagram not to scale

