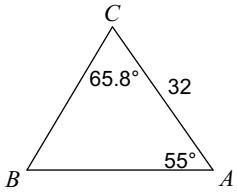
# 7.8 ~ The Law of Sines

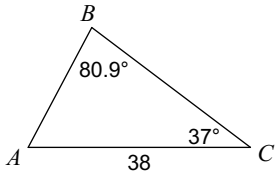
Past due on_____ Period____

**Use the Law of Sines to find the length of the indicated side rounded to the nearest hundredth.**

1) Find BC

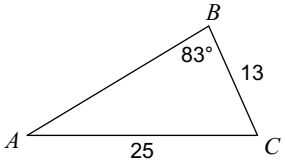



2) Find AB

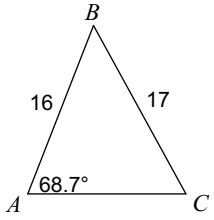



**Use the Law of Sines to find the measure of the indicated angle to the nearest tenth of a degree.**

3) Find $m\angle A$

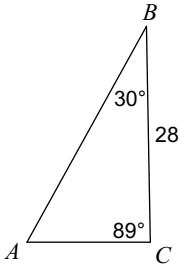



4) Find $m\angle C$

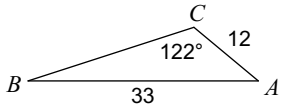



**Use the Law of Sines to solve the oblique triangle; that is, find ALL missing side lengths and angle measures. Round angle measures to the nearest tenth of a degree; round side lengths to the nearest hundredth.**

5)




6)




**Find the area of each triangle to the nearest tenth.**

7) $b = 7.7,\ m\angle A = 132°,\ c = 8.2$

8) $c = 8.9,\ m\angle B = 131°,\ a = 5.5$

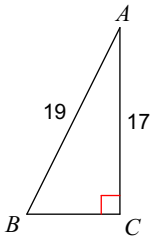
**7.5 REVIEW: Sketch the right triangle described. Use the Pythagorean Theorem to find the third side. Then find the value of the indicated trig function.**

9) Find $\sin\theta$ if $\cot\theta = \frac{1}{7}$

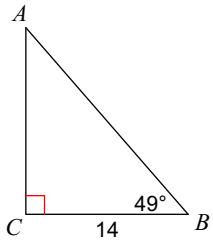
10) Find $\tan\theta$ if $\csc\theta = \frac{4}{3}$

**7.6 REVIEW: Solve each right triangle. Round angle measures to the nearest tenth of a degree; round side lengths to the nearest hundredth.**

11)




12)




**7.7 REVIEW: Draw a diagram that represents the situation and then set up and solve a trigonometric equation. Round solutions to the nearest tenth.**

13) A gangplank is a narrow ramp used for boarding a ship. The safe angle of elevation is 20°. Suppose a gangplank is 10 feet long, what is the closest a ship can come to the dock for the gangplank to be used?