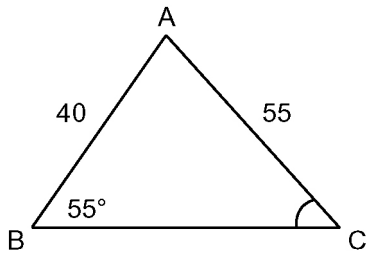
Name: _____ Date: _____

Section 1.3 The Sine Law

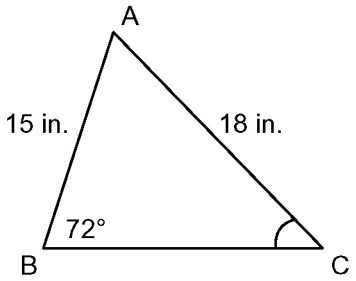
1. State the sine law in two different forms.

2. Find the measure of ∠C, to the nearest tenth of a degree.

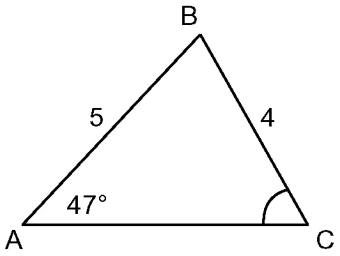
a)



b)

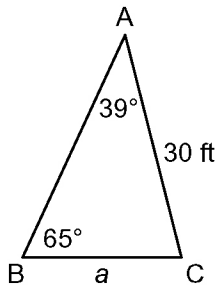


c)



3. Find the measure of the indicated side, to the nearest tenth.

a)



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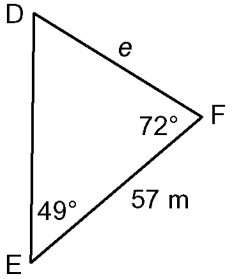
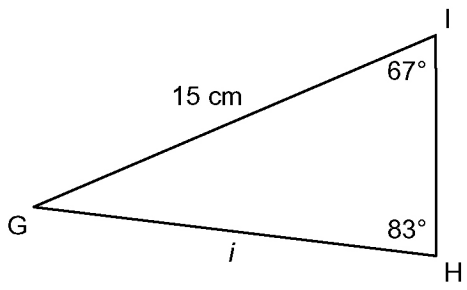
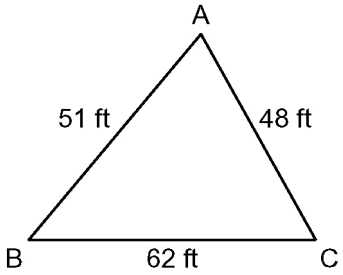


c)



4. Explain why the triangle cannot be solved using the sine law.



5. Solve each triangle. Round your answers to the nearest unit, if necessary.

a) △ABC, given ∠B = 57°, ∠C = 72°, and b = 18 m.

b) △DEF, given ∠D = 66°, ∠F = 39°, and e = 10 ft.

c) △GHI, given ∠G = 72°, g = 15 cm, and h = 8 cm.

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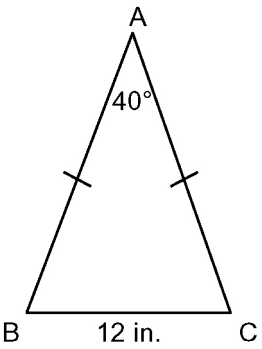
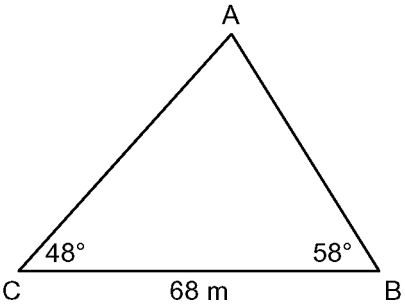
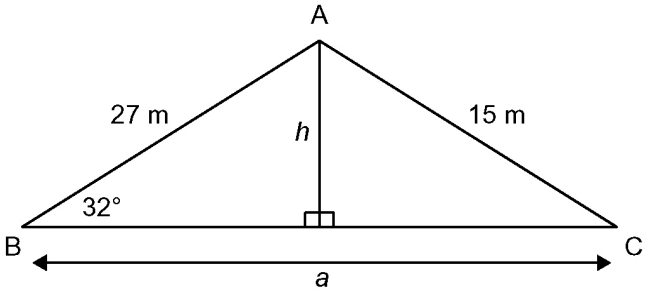
6. Find the perimeter of isosceles △ABC, to the nearest inch.



7. Find the length of side AB to the nearest tenth of a metre.

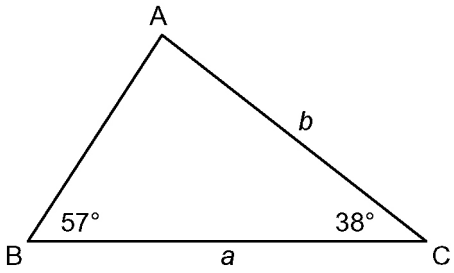


8. Two guy wires 27 m and 15 m in length are to be fastened to the top of a TV tower from two points B and C as shown. The angle of elevation to the top of the tower of the longer wire is 32°.

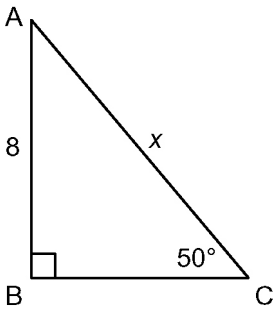


a) How far apart are points B and C?
b) How tall is the tower?

9. The longest side of a triangle is 33 ft. Find the lengths of the other two sides to the nearest foot.



10.



a) Use the sine ratio to find the value of x, to the nearest tenth.
b) Use the sine law to find the value of x, to the nearest tenth.
c) Explain why the two methods are equivalent for a right triangle.