Geometry
Ch. 9C HW #4

Name: _____
Period: _____

Use your calculator to find the value of the following.

1) Find the value of b

$$b^2 = 3^2 + 8^2 - 2(3)(8)\cos(36°)$$

2) Find the value of A.

$$7^2 = 5^2 + 8^2 - 2(5)(8)\cos(A)$$

3) Find the value of A

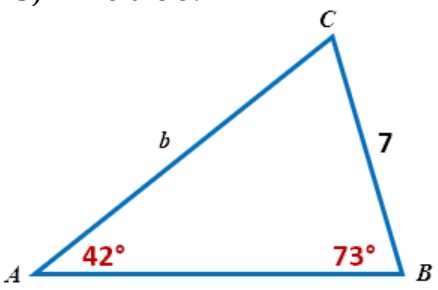
$$\frac{\sin(A)}{12} = \frac{\sin(53°)}{16}$$

4) Find the value of C.
It should be obtuse. Watch out for the negative values.

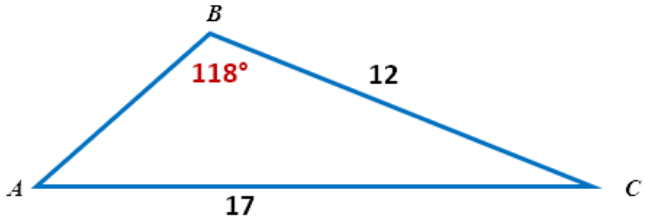
$$19^2 = 12^2 + 8^2 - 2(12)(8)\cos(C)$$

Find the indicated value for each triangle. Use Law of Sines, Cosines, SOHCAHTOA, Pythagorean Theorem

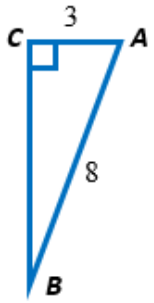
5) Find the b.



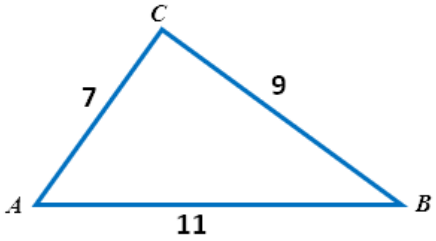
6) Find the value of A and C.



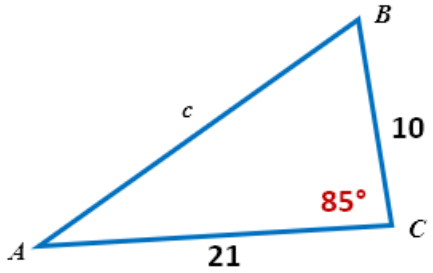
7) Find the value of a.



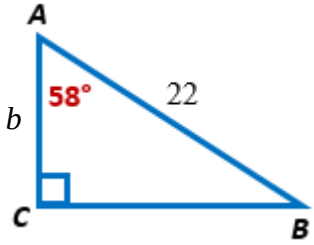
8) Find the value of B **and** find the area of $\triangle ABC$



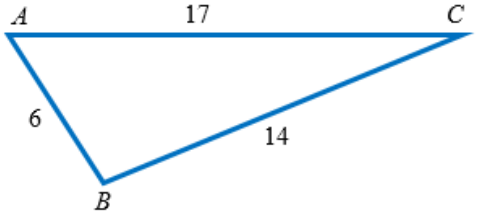
9) Find the value of c.



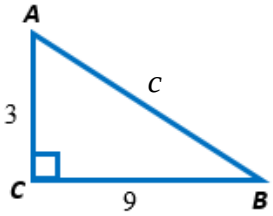
10) Find the value of b and area of $\triangle ABC$.



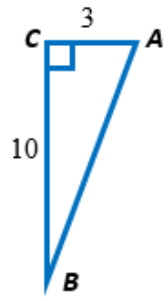
11) Find the value of *B*.



12) Find the value of *c* **and** find the area $\triangle ABC$

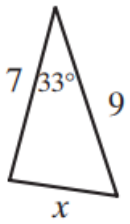


13) Find the value of *B*.

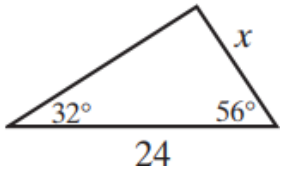


Determine which method, **Law of Sines** of **Law of Cosines**, could be used to solve for *x*. You DON"T need to find *x*.

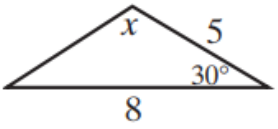
14)



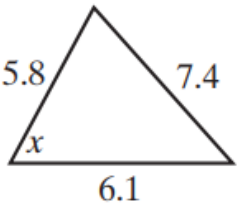
15)



16)

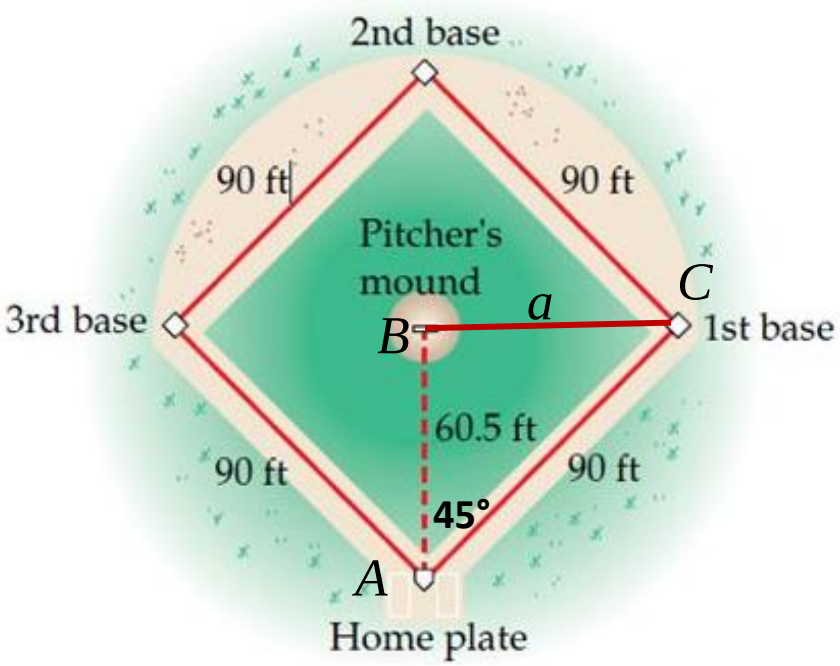


17)

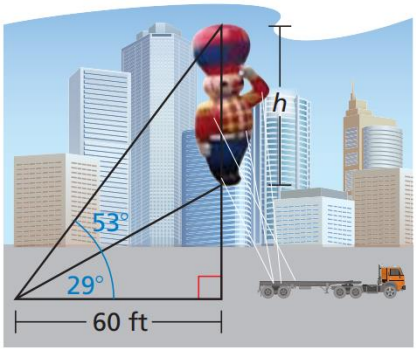


Optional Challenge: Applications

18) A standard baseball diamond is shown.
- a) Find the distance from the pitcher's mound to first base.
- b) Find the distance from pitcher's mound to 2nd base. (note: it is not 60.5 ft)



19) The angle of elevation to the top of the balloon is 53° and the angle of elevation to the bottom of the balloon is 29°. Find value of *h*.



Answers:
1-4: 5.85, 60°, 36.8°, 142.8° **5-13:** 10.00, 38.6°, 23.4°, 7.42, 39.4°, 31.42, 22.46, 11.66, 108.75, 109.8°, 9.49, 13.5, 16.7° **14-17:** LoC, LoS, LoS, LoC **18:** 63.72, 66.78 **19:** 46.36