

**9.5 Sine & Cosine Trigonometric Ratio CYU**

Use when you get it right all by yourself

**S** Use when you did it all by yourself, but made a silly mistake

**H** Use when you could do it alone with a little help from teacher or peer

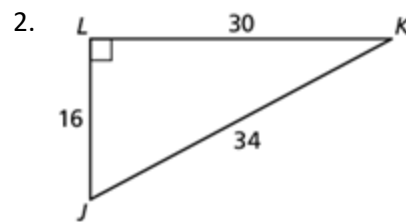
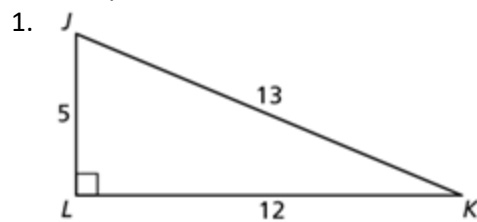
**G** Use when you completed the problem in a group

**X** Use when a question was attempted but wrong (get help)

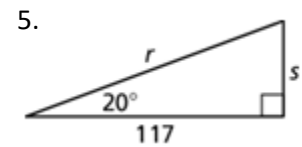
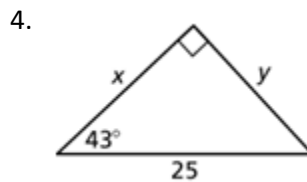
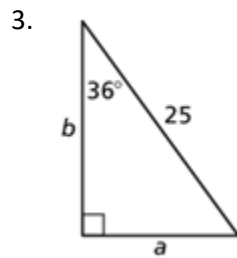
**N** Use when a question was not even attempted

CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Sine & Cosine ratio	1, 2	3 - 5	9, 10, 12
Exact answer	1, 2	3 - 5	
Rounded answer	1, 2	3 - 8, 11	
Perimeter		11	
Real- World Application			10 - 12
Inverse Sine & Cosine		6 - 8	

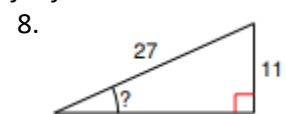
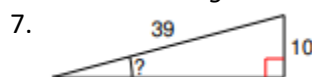
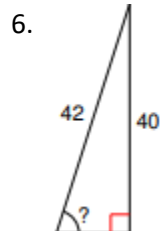
Find  $\sin J$ ,  $\sin K$ ,  $\cos J$  and  $\cos K$ . Write each answers as a fraction AND as a decimal rounded to four decimal places.



Find the value of each variable using sine and cosine. Show the set up to earn full credit. Then write your answer exact and rounded to the nearest tenth.

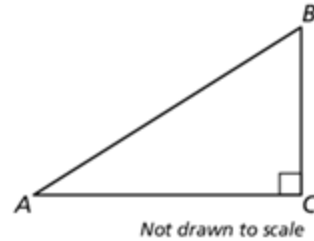


Find the measure of the indicated angle to the nearest degree. Show your set up for full credit.



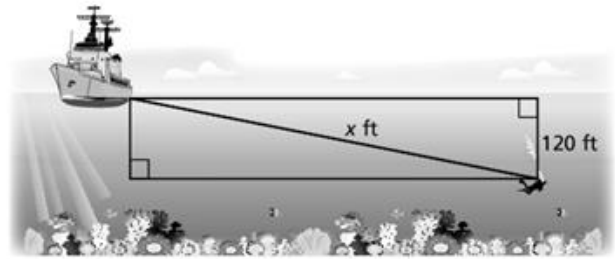
9. Which statement *cannot* be true? Explain.

- A.  $\sin A = 0.5$
- B.  $\sin A = 1.2654$
- C.  $\sin A = 0.9962$
- D.  $\sin A = \frac{3}{4}$

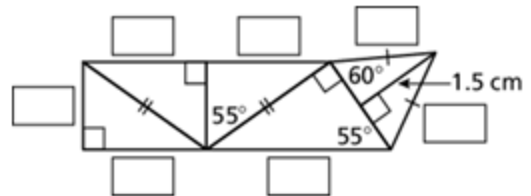


*Real-World Application*

10. The angle of depression is  $11^\circ$  from the bottom of a boat to a deep sea diver at a depth of 120 feet. Find the distance  $x$  the diver must swim up to the boat to the nearest foot.

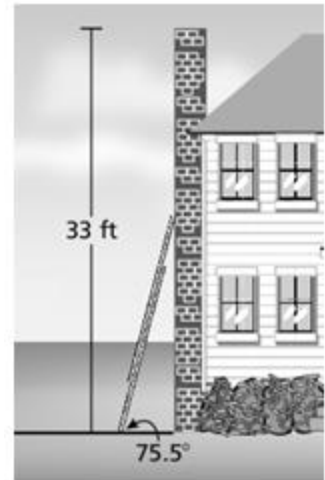


11. Find the perimeter of the figure shown. Round your answer to the nearest centimeter.



12. You use an extension ladder to repair a chimney that is 33 feet tall. The length of the extension ladder ranges in one-foot increments from its minimum length to its maximum length. For safety reasons, you should always use an angle of about  $75.5^\circ$  between the ground and your ladder.

- a) Your smallest extension ladder has a maximum length of 17 feet. How high does this ladder safely reach on the chimney? Round your answer to the nearest tenth of a foot.
- b) You place the ladder 3 feet from the base of the chimney. How many feet long should the ladder be? Round your answer to the nearest foot.
- c) To reach the top of the chimney, you need a ladder that reaches 30 feet high. How many feet long should the ladder be? Round your answer to the nearest foot.



**CYU Reflection:** *How far can you go: basic, intermediate, or advanced?*

**Rate your mastery level!**

How confident are you with the skills this CYU covered? Circle the score you would give yourself.

1    2    3    4    5    6    7    8

1   2   3   4   5   6   7   8

Basic                      Intermediate                      Advanced      Solved ALL!

