

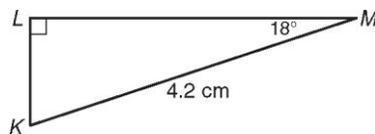
## Problem Solving

### Trigonometric Ratios

1. A ramp is used to load a 4-wheeler onto a truck bed that is 3 feet above the ground. The angle that the ramp makes with the ground is  $32^\circ$ . What is the horizontal distance covered by the ramp? Round to the nearest hundredth.

\_\_\_\_\_

2. Find the perimeter of the triangle. Round to the nearest hundredth.



\_\_\_\_\_

3. A right triangle has an angle that measures  $55^\circ$ . The leg adjacent to this angle has a length of 43 cm. What is the length of the other leg of the triangle? Round to the nearest tenth.

\_\_\_\_\_

4. The hypotenuse of a right triangle measures 9 inches, and one of the acute angles measures  $36^\circ$ . What is the area of the triangle? Round to the nearest square inch.

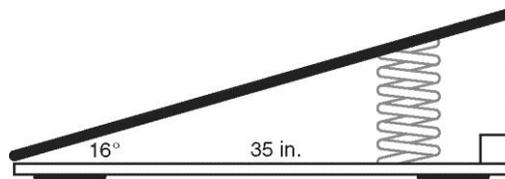
\_\_\_\_\_

### Choose the best answer.

5. A 14-foot ladder makes a  $62^\circ$  angle with the ground. To the nearest foot, how far up the house does the ladder reach?

- A 6 ft
- B 7 ft
- C 12 ft
- D 16 ft

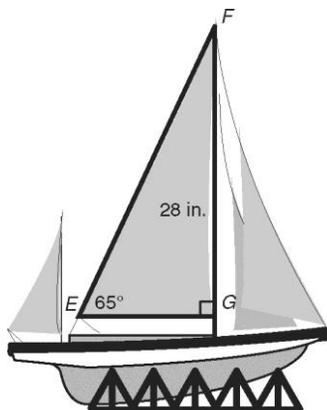
6. To the nearest inch, what is the length of the springboard shown below?



- F 24 in.
- G 36 in.
- H 38 in.
- J 127 in.

7. What is  $EF$ , the measure of the longest side of the sail on the model? Round to the nearest inch.

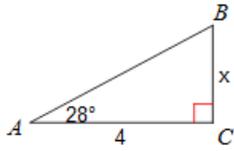
- A 31 in.
- B 35 in.
- C 40 in.
- D 60 in.



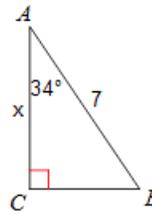
8. Right triangle  $ABC$  is graphed on the coordinate plane and has vertices at  $A(-1, 3)$ ,  $B(0, 5)$ , and  $C(4, 3)$ . What is the measure of  $\angle C$  to the nearest degree?

- F  $27^\circ$
- G  $29^\circ$
- H  $32^\circ$
- J  $43^\circ$

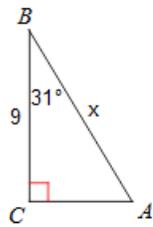
1)



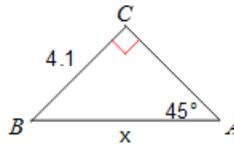
2)



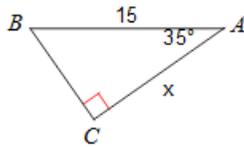
3)



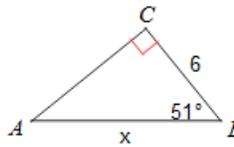
4)



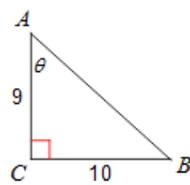
5)



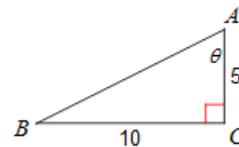
6)



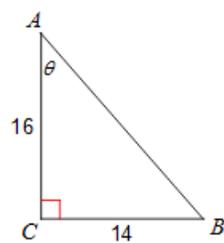
7)



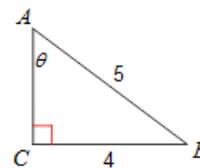
8)



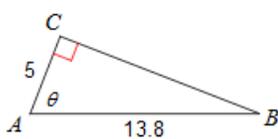
9)



10)



11)



12)

