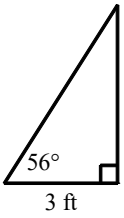
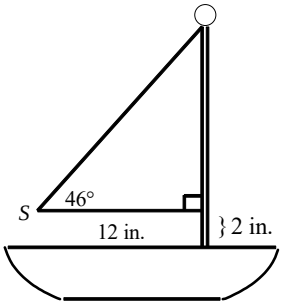
NAME:_____

1. A ladder leans against a building forming an angle of 56° with the ground. The base of the ladder is 3 feet from the building. Use the cosine to determine the length of the ladder.



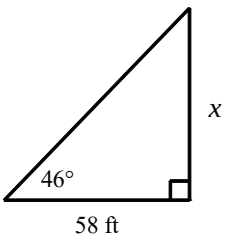
[A] 4.45 ft [B] 4.97 ft [C] 3.62 ft [D] 5.36 ft

2. You are building a model sailboat. The mast will have two inches of height below the base of the main sail. You want the base of the sail to have a length of 12 in. If you require the angle *S* in the sail to be 46°, what will be the height of the mast to the nearest tenth inch?



[A] 14.4 inches [B] 12.4 inches [C] 15.8 inches [D] 12.3 inches

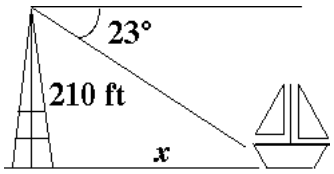
3. A photographer shines a camera light at a particular painting forming an angle of 46° with the camera platform. If the light is 58 feet from the wall with the painting, how high above the platform is the painting?



[A] 1.04 ft [B] 56.01 ft [C] 0.97 ft [D] 60.06 ft

NAME:_____

4. Which two trigonometric equations could be used to find x?



[A] $\sin 23^\circ = \frac{210}{x}$, $\cos 67^\circ = \frac{x}{210}$

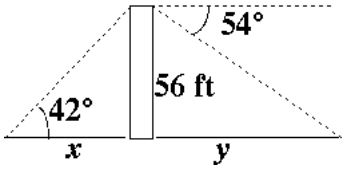
[B] $\tan 67^\circ = \frac{210}{x}$, $\tan 23^\circ = \frac{x}{210}$

[C] $\tan 23^\circ = \frac{210}{x}$, $\tan 67^\circ = \frac{x}{210}$

[D] $\cos 23^\circ = \frac{210}{x}$, $\sin 67^\circ = \frac{x}{210}$

[E] $\sin 23^\circ = \frac{210}{x}$, $\tan 23^\circ = \frac{x}{210}$

5. Compare the quantity in Column A with the quantity in Column B.



Column A	Column B
x	y

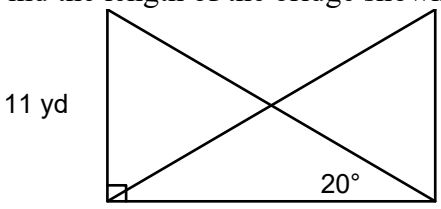
[A] The quantity in Column A is greater.

[B] The quantity in Column B is greater.

[C] The two quantities are equal.

[D] The relationship cannot be determined on the basis of the information supplied.

6. Find the length of the bridge shown in the drawing. Round your answer to the nearest hundredth.



[1] D

[2] A

[3] D

[4] C

[5] A

[6] 30.22 yd