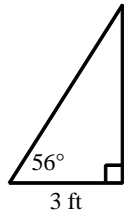


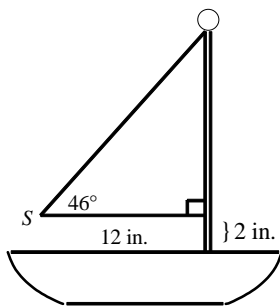
P.I. A.A.44: Find the measure of a side of a right triangle, given an acute angle and the length of another side

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.



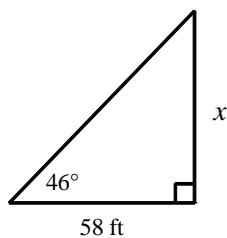
- [A] 4.45 ft [B] 4.97 ft [C] 3.62 ft [D] 5.36 ft

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?



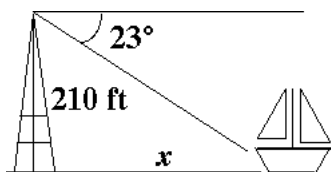
- [A] 14.4 inches [B] 12.4 inches [C] 15.8 inches [D] 12.3 inches

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

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



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

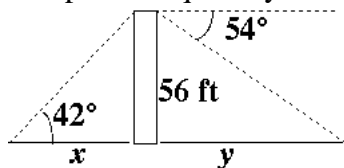
[B] $\tan 67^\circ = \frac{210}{x}$, $\tan 23^\circ = \frac{x}{210}$

[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

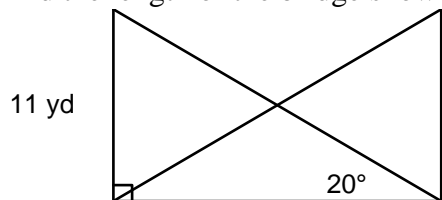
[A] The quantity in Column A is greater.

[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.



Integrated Algebra Practice: A.A.44 #4

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[1] D

[2] A

[3] D

[4] C

[5] A

[6] 30.22 yd