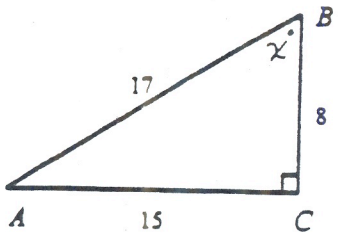
SOL Practice
Standard G.7

Find trigonometric ratios using right triangles.

find the angle measure (use $\sin^{-1}$, $\cos^{-1}$ or $\tan^{-1}$ - your choice!)

7. Which is cos B?

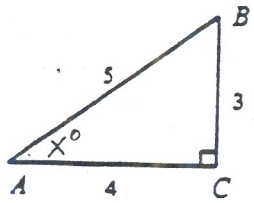


Choose the correct fraction!

cos B = [A] $\frac{8}{17}$ [B] $\frac{15}{8}$ [C] $\frac{8}{15}$ [D] $\frac{15}{17}$

X = _____ °

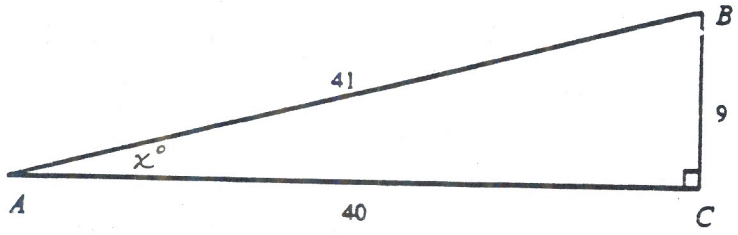
8. Which is cos A?



cos A = [A] $\frac{3}{5}$ [B] $\frac{4}{5}$ [C] $\frac{4}{3}$ [D] $\frac{3}{4}$

X = _____ °

9. Which is cos B?



cos B = [A] $\frac{9}{41}$ [B] $\frac{40}{41}$ [C] $\frac{40}{9}$ [D]

X = _____ °

Use trigonometry to solve problems involving angles of elevation or depression. draw on loose leaf - staple to this sheet!

10. A person at the top of a lighthouse sights a boat in the water. The angle of depression is 50°. If the lighthouse is 70 feet high, find the distance from the base of the lighthouse to the boat.

[A] about 91.38 feet [B] about 108.90 feet [C] about 83.42 feet [D] about 58.74 feet

(11.) Alberto sights the top of a building at an angle of elevation of 70°. If the building is 40 feet tall and Alberto's eyes are 6 feet from the ground, how far is Alberto from the base of the building?

Like "Chard problem."

[A] about 109.90 feet [B] about 14.56 feet [C] about 42.57 feet [D] about 16.74 feet

(12.) A surveyor is 100 meters from a building. The angle of elevation to the top of the building is 23°. If the surveyor's instrument is 1.55 meters above the ground, find the height of the building.

[A] about 44.00 meters [B] about 42.45 meters [C] about 44.12 meters [D] about 40.90 meters

Use the Law of Sines to solve triangles.

13. Solve triangle ABC given that $A = 43°$, $B = 42°$, and $b = 66$.

[A] $C = 275°$, $a = 64.75$, $c = 96.41$

[B] $C = 95°$, $a = 67.27$, $c = 98.26$

[C] $C = 275°$, $a = 67.27$, $c = 98.26$

[D] $C = 95°$, $a = 64.75$, $c = 96.41$