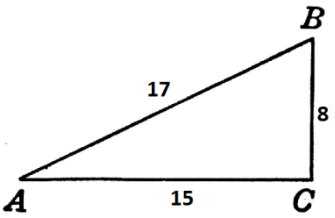
Geometry (A)
SOHCAHTOA Quiz Review

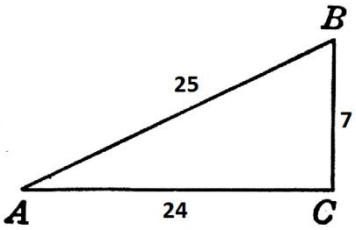
Name : _____
Date : _____ Period : ____

For questions #1 and 2, please write your answer in fractions in simplest form and as a decimal rounded to four places as necessary.

1. Find tan A for the right triangle below.

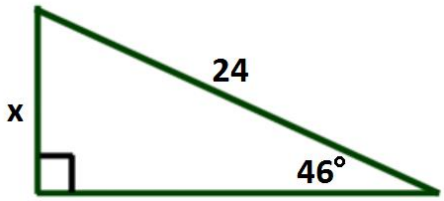


2. Please find cos B.



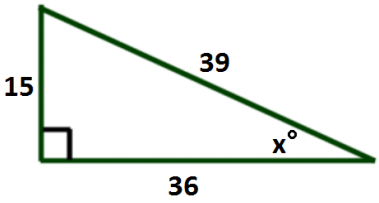
3. Use your calculator to evaluate cos 23°.
   a. About 0.9205
   b. About 0.3901
   c. About 1.0723
   d. About 0.4239

4. What is the value of x to the nearest hundredth? (NOTE : diagram not drawn to scale)

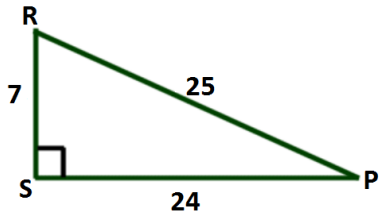


   a. x = 23.18
   b. x = 24.85
   c. x = 16.67
   d. x = 17.26

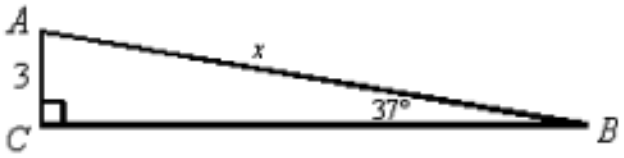
5. Use the diagram to find cos x as a fraction in simplest form.



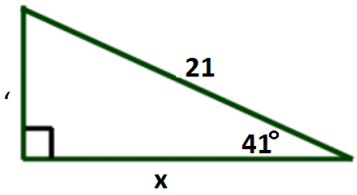
6. Please find sin R, cos R, tan R as fractions in simplest form.



7. Please find the value of x, to the nearest hundredth. (NOTE: diagram not drawn to scale)

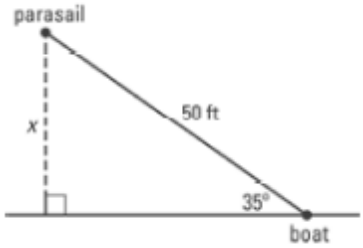


8. Please find x. Round to the nearest hundredth.

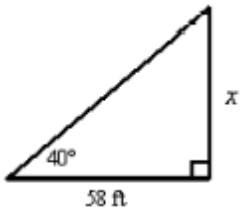


9. A 20 foot string attached to a kite makes a 30° angle with the ground. What is the height of the kite?

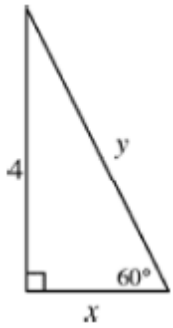
10. A parasailing company uses a 50-foot cable to connect the parasail to the back of the boat. About how far is the parasail from the water when the cable has a 35° angle of elevation? Round to the nearest tenth.



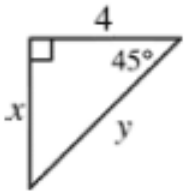
11. A photographer shines a camera light at a particular painting forming an angle of 40° with the camera platform. If the light is 58 feet from the wall where the painting hangs, how high above the platform is the painting? Round to the nearest tenth.



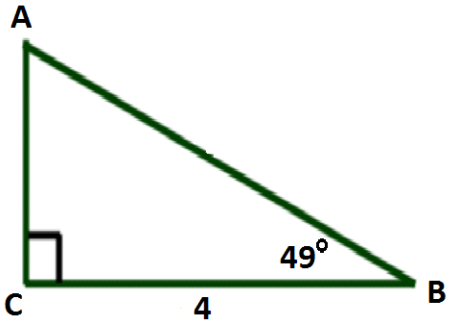
12. Find the missing side lengths for x and y using the special right triangle patterns. Then find x and y using the appropriate trigonometric ratios.



13. Find the missing side lengths for x and y using the special right triangle patterns. Then find x and y using the appropriate trigonometric ratios.

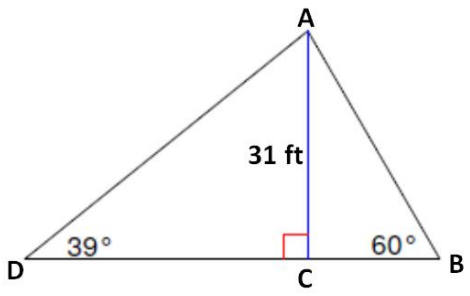


14. Find all side lengths and angle measures of ΔABC using the diagram below. Round to the nearest tenth.

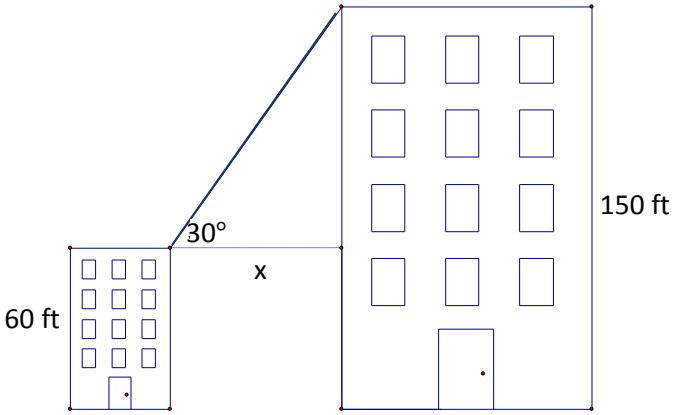


15. The flagpole in Newington High School's parking lot casts a 100 ft shadow along the ground. If the angle of elevation from the tip of the shadow to the top of the flagpole is 40°, how tall is the flagpole? Round to the nearest tenth.

16. Please find the length of $\overline{DB}$.



17. You are standing on top of a 60 foot building looking up at the top of a 150 foot building. The angle of elevation you measure is 30°. How far apart are the buildings?



ANSWERS

1) $\frac{8}{15}, 0.5333$ 2) $\frac{7}{25}, 0.28$ 3) A 4) D 5) $\frac{12}{13}$ 6) $\frac{24}{25}, \frac{7}{25}, \frac{24}{7}$ 7) 4.98

8) 15.85 9) 10 ft 10) 28.7 ft 11) 48.7 ft 12) SRT: $x = \frac{4\sqrt{3}}{3}, y = \frac{8\sqrt{3}}{3}$; TRIG: x = 2.3, y = 4.6

13) SRT: $x = 4, y = 4\sqrt{2}$; TRIG: x = 4, y = 5.7 14) $m\angle A = 41°$, AC = 4.6, AB = 6.1 15) 83.9 ft

16) 56.2 ft 17) 155.9 ft