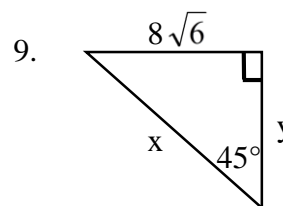
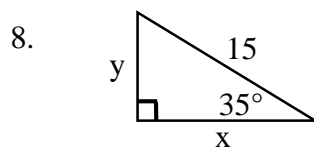
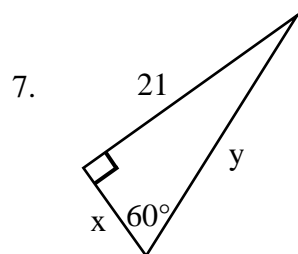
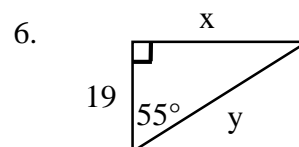
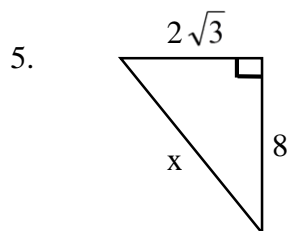
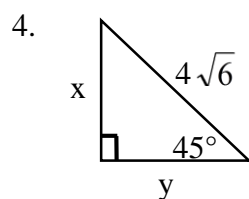
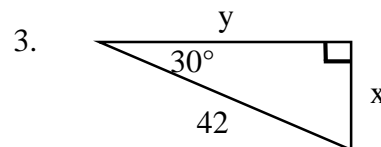
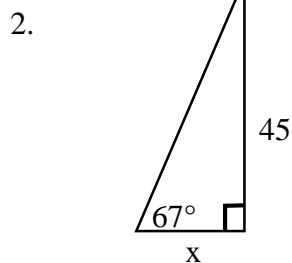
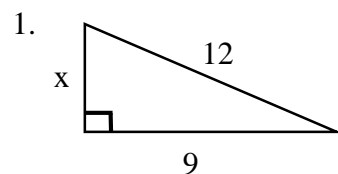


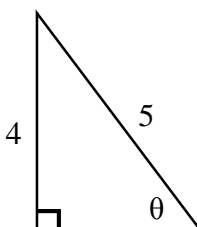
5.1 Right Triangle Trig Review

I. Find the missing side of each triangle below. Use can use the Pythagorean Theorem, the rules for Special Right Triangles, or SOH CAH TOA.



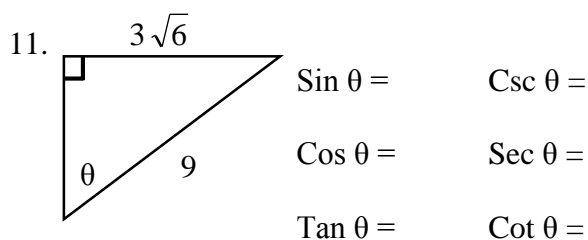
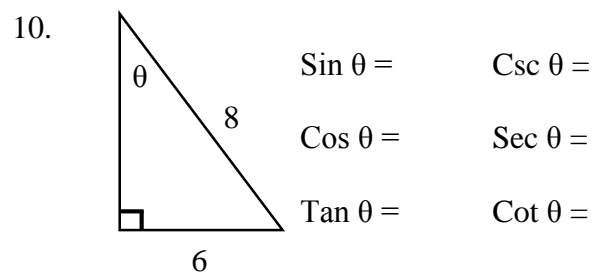
II. Given the following triangles, write out the 6 trig ratios using SOH CAH TOA.

EX.

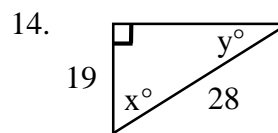
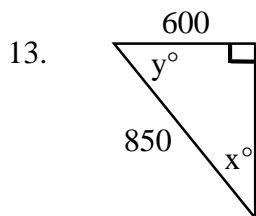
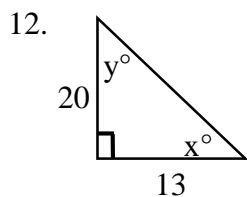


$$\sin \theta = \frac{4}{5} \quad \cos \theta = \frac{3}{5} \quad \tan \theta = \frac{4}{3}$$

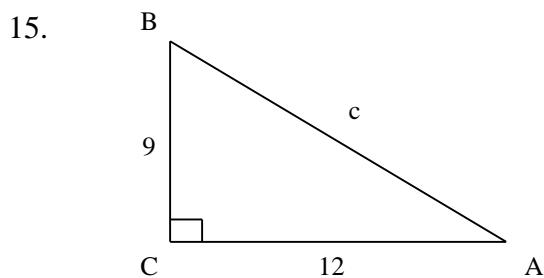
$$\csc \theta = \frac{5}{4} \quad \sec \theta = \frac{5}{3} \quad \cot \theta = \frac{3}{4}$$



III. Use SOH CAH TOA to find the missing angle measures in each triangle below.



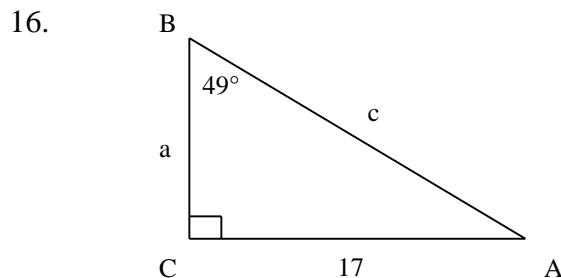
IV. To “Solve a Triangle” means to find all of the missing sides/angles in any given triangle. Solve the right triangles below by any means. You should start by writing in the sides/angles that you already know in the table below. Remember, side a is opposite angle A. This holds true for all sides and angles.



A = _____ a = _____

B = _____ b = _____

C = _____ c = _____



A = _____ a = _____

B = _____ b = _____

C = _____ c = _____

V. Solve each word problem below. Draw a triangle and label the side lengths and angle measures before you decide which trig function to use. Some problems may require you to use the Pythagorean Theorem.

17. Jesse is standing 300 meters from the base of a radio tower. According to his astrolabe, the measurement of the angle of elevation to the top of the tower is 40° . How high is the tower?

18. A railroad track rises 10 feet for every 400 feet along the track. What is the measurement of the angle the track forms with the horizontal?

19. A horizontal shelf is held up on a wall by a diagonal brace that fastens the furthest point on the shelf to the wall below the shelf. If the brace is 30 inches long and the shelf is 24 inches deep then how far below the shelf does the brace fasten to the wall?

20. A tree was broken in a recent storm. The top of the tree touches the ground 13 meters from the base. The top of the tree makes an angle of 29° with the ground. How tall was the tree before it was broken?