

DUE: A-Day Monday 01/07/16, B-day Friday 01/06/16

Pre-Calculus: Lesson 4.3 Right Triangle Trigonometric p.280, #1,4,5,6, #7-20 odd

Please complete the assignment using the “tri-fold” method (You may use www.calcchat.com to check your work):

Vocabulary and Concept Check

1. Match the trigonometric function with its right triangle definition.

- (a) sine (b) cosine (c) tangent (d) cosecant (e) secant (f) cotangent
(i) $\frac{\text{hyp}}{\text{adj}}$ (ii) $\frac{\text{opp}}{\text{adj}}$ (iii) $\frac{\text{opp}}{\text{hyp}}$ (iv) $\frac{\text{adj}}{\text{opp}}$ (v) $\frac{\text{hyp}}{\text{opp}}$ (vi) $\frac{\text{adj}}{\text{hyp}}$

In Exercises 4–6, use the figure to answer the question.

4. What is the length of the side opposite the angle θ ?
5. What is the length of the side adjacent to the angle θ ?
6. What is the length of the hypotenuse?

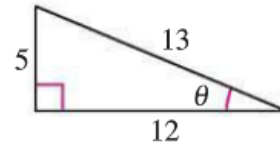
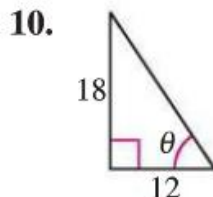
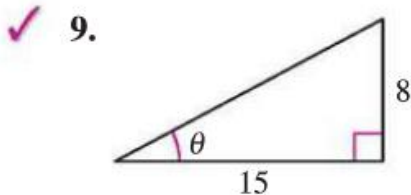
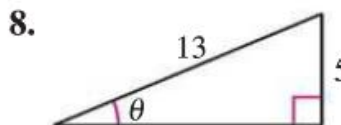
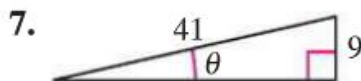


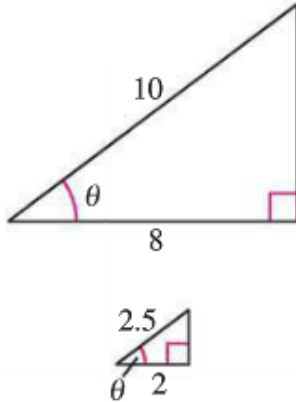
Figure for Exercises 4–6

Evaluating Trigonometric Functions In Exercises 7–10, find the exact values of the six trigonometric functions of the angle θ shown in the figure. (Use the Pythagorean Theorem to find the third side of the triangle.)

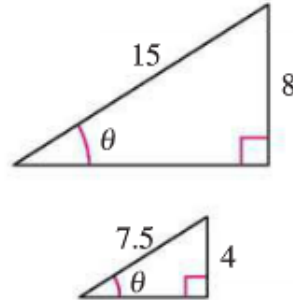


Evaluating Trigonometric Functions In Exercises 11 and 12, find the exact values of the six trigonometric functions of the angle θ for each of the triangles. Explain why the function values are the same.

11.



12.



Evaluating Trigonometric Functions In Exercises 13–20, sketch a right triangle corresponding to the trigonometric function of the acute angle θ . Use the Pythagorean Theorem to determine the third side of the triangle and then find the other five trigonometric functions of θ .

13. $\sin \theta = \frac{5}{6}$

14. $\cot \theta = 5$

15. $\sec \theta = 4$

16. $\cos \theta = \frac{3}{7}$

17. $\tan \theta = 3$

18. $\csc \theta = \frac{17}{4}$

19. $\cot \theta = \frac{3}{2}$

20. $\sin \theta = \frac{3}{8}$