

Trigonometry

Name: _____

Study Guide 4

Class: _____

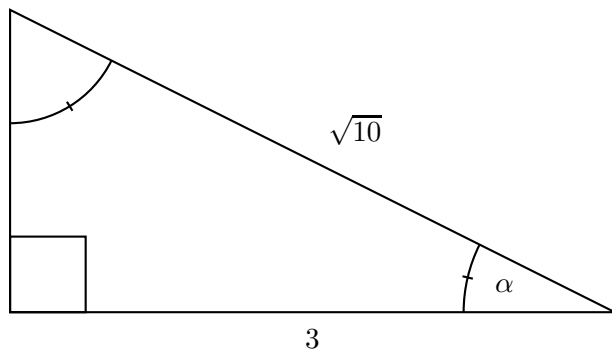
Due Date: _____

Score: _____

No Work \Leftrightarrow No Points

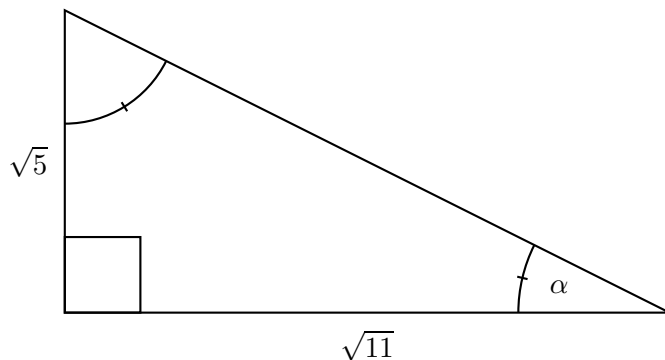
Use Pencil Only \Leftrightarrow Be Neat & Organized

1. (5 points) Find the missing side and then find the value of all six trigonometric function of the indicated angle.



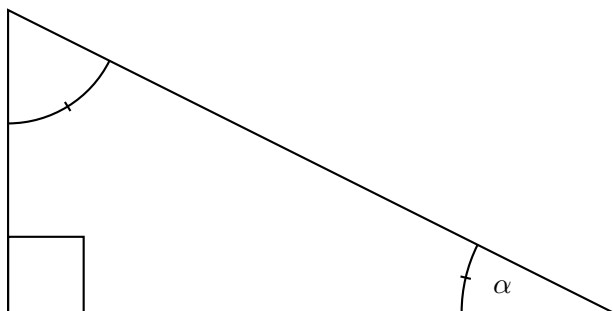
1. _____

2. (5 points) Find the missing side and then find the value of all six trigonometric function of the indicated angle.



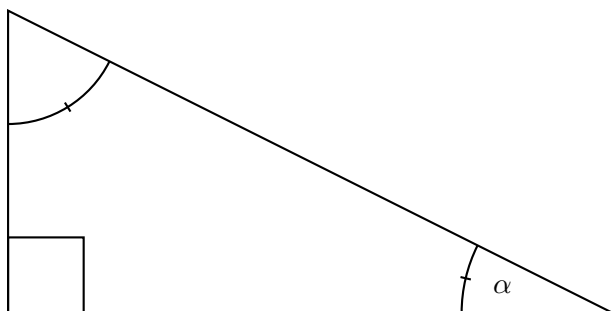
2. _____

3. (5 points) Given: $\cos \alpha = \frac{\sqrt{3}}{7}$, Use the triangle below, find the missing side and then find the value of all remaining trigonometric function of the indicated angle.



3. _____

4. (5 points) Given: $\csc \alpha = \sqrt{5}$, Use the triangle below, find the missing side and then find the value of all remaining trigonometric function of the indicated angle.



4. _____

5. (2 points) Simplify: $(\tan \alpha + \cot \alpha)^2 - 2$

5. _____

6. (3 points) Simplify: $(\sin x - \cos x)^2 + 2 \sin x \cdot \cos x$

6. _____

7. (5 points) Given: $\cos \alpha = \frac{\sqrt{6}}{6}$, Find the value of all six trigonometric function of the angle $-\alpha$.

7. _____

8. (5 points) Given: $\tan \alpha = \frac{2}{5}$, Find the value of all six trigonometric function of the angle $-\alpha$.

8. _____

9. (5 points) Given: $\csc \alpha = 3$, Find the value of all six trigonometric function of the angle $-\alpha$.

9. _____

10. (3 points) Verify: $(1 - \tan \alpha)(1 - \cot \alpha) + \sec \alpha \csc \alpha = 2$

10. _____

11. (3 points) Verify: $(\sec x - 1)(\sec x + 1) = \tan^2 x$

11. _____

12. Algebra Review Problems:

(a) (2 points) Solve and rationalize your answers: $(\sqrt{2}x - 1)(\sqrt{2}x + 1) = 0$

(a) _____

(b) (2 points) Solve $2x^2 - x - 1 = 0$ by using the quadratic formula.

(b) _____