

Trig Practice

Name: _____ Period: _____

Find two solutions of the equation. Give your answers in both degrees and radians in terms of pi, fully reduced with no decimals.				
1. $\sin \theta = \frac{1}{2}$	2. $\sin \theta = -\frac{1}{2}$	3. $\csc \theta = \frac{2\sqrt{3}}{3}$	4. $\cot \theta = -1$	5. $\tan \theta = 1$
Find the value of the reference angle θ' and sketch θ and θ' in standard position.				
6. $\theta = 160^\circ$	7. $\theta = -125^\circ$	8. $\theta = \frac{2\pi}{3}$	9. $\theta = 4.8$	10. $\theta = \frac{7\pi}{6}$
Use trig to solve for the correct unknown value. Include a sketch to show the setup of your triangle.				
11. A 12-meter flagpole casts a 9-meter shadow. Find the angle of depression.		12. A fire department ladder is 110 feet long. Safety regulations state that they can use this ladder for rescues up to 100 feet off the ground. What is the maximum angle of elevation they can set the ladder and be within the safety requirement?		
13. Use the unit circle to evaluate the six trigonometric functions of $\theta = \frac{3\pi}{2}$.		14. Use the unit circle to evaluate the six trigonometric functions of $\theta = \frac{5\pi}{6}$.		
15. $(-12, -5)$ is a point on the terminal side of the angle. Find the exact values of the sine, cosine and tangent of the angle. Draw a sketch to support your answer.		16. State the quadrant in which the angle lies. A. $\sin > 0$ and $\cos > 0$ B. $\sin < 0$ and $\cos < 0$ C. $\sin > 0$ and $\cos < 0$ D. $\sec > 0$ and $\cot < 0$		
Given each angle and constraint, sketch the angle, find any missing sides, then find the exact value of the six trigonometric functions.				
17. $\tan \theta = -\frac{15}{8}, \sin \theta > 0$	18. $\sin \theta = \frac{3}{5}, \tan \theta < 0$	19. $\cos \theta = -\frac{4}{5}, \tan \theta > 0$	20. $\sec \theta = -2, \sin \theta < 0$	