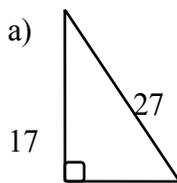


Angles and Right Triangles

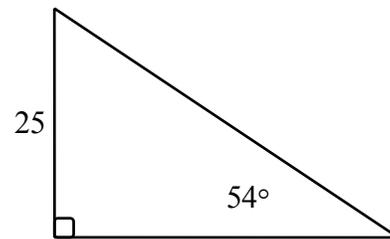
1. Determine the value of the six trig functions given the point on the coordinate plane is $(-3, -9)$

2. Determine the five remaining trig functions given that $\cos x = -7/12$

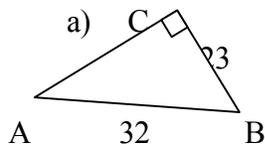
3. Determine the missing components of the right triangle: (label the triangle in a manner that best suits your needs).



b)



2. Determine the indicated trig functions from the given triangle.



- 1) $\sin \angle A$
- 2) $\cot \angle B$
- 3) $\sec \angle A$

3. Determine the missing components of a right triangle given the following information:
 $\angle C = 90^\circ$, $a = 2$ and $\angle B = 18^\circ$.

4. If one end of a loading ramp is 1.5 meters from the ground and the other end makes an angle of 9° with the ground, find the length of the ramp.

Special Angles:

1. Simplify without using a calculator:

a) $\sin 30^\circ + \tan 60^\circ$

b) $2 \cos 45^\circ + \sec 60^\circ$

c) $\sec 120^\circ + \tan 240^\circ - (\csc 315^\circ)^2$

d) $(\sin 45^\circ + \cos 30^\circ)(\cos 45^\circ - \sin 120^\circ)$

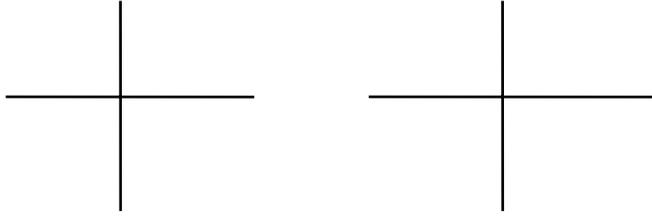
d) $\sec \frac{\pi}{6} + \tan \frac{2\pi}{3}$

e) $\tan \frac{11\pi}{6} * \sin \frac{5\pi}{4} * \csc \frac{5\pi}{3}$

f) $\sec \frac{\pi}{3} \left(\cot \frac{7\pi}{6} + \sin \frac{2\pi}{3} \right)$

g) $\sin \frac{15\pi}{3} + \sec \frac{11\pi}{4} - \csc \frac{13\pi}{3}$

1. Draw an angle in standard position having:
 a) a degree measure of 203° b) a degree measure of -310°



2. Give two positive and two negative coterminal angles for:
 a) 215° _____, _____, _____, _____
 b) -313° _____, _____, _____, _____
3. Give the reference angle for each of the following:
 a) 160° _____ b) -156° _____ c) 203° _____ d) -805° _____
4. Convert the following angle into "pi" and radian measures
 156° _____, _____
5. Convert the following pi measures into degree and radian measure
 $\frac{7}{9}\pi$ _____, _____
6. Convert the following radian measure into degree and pi measure
 5.43 _____, _____
7. Determine the missing information:
 a) the distance the point $(4, -2)$ is from the origin
 b) the x coordinate of the point that is 10 units from the origin that has a y coordinate of -4 and exists in the fourth quadrant.
8. Determine the following values:
 a) $\sin 127^\circ$ _____, b) $\tan 212^\circ$ _____ c) $\csc 209^\circ$ _____
9. Convert 69.497 degrees into degrees, minutes and seconds
10. Convert 12 degrees 19 minutes 56 seconds into degrees.

