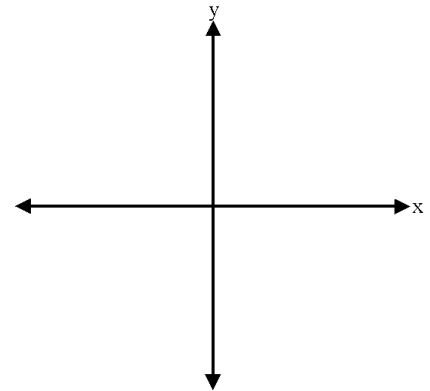


1. The terminal side of an angle θ in standard position coincides with the line $y = -4x$ and lies in Quadrant IV. Find $\sin \theta$ and $\sec \theta$.

(Hints: Use the provided axes to graph the line $y = -4x$. Recall how to graph a line. The slope is rise over run. It would be helpful to mark slashes on the axes for your line. Extend the line into the given quadrant. Construct a right triangle from the line to the x-axis in that quadrant. Label the side lengths of the triangle. These should correspond to the rise and run of your slope. Put negatives where appropriate for the given quadrant. Use the Pythagorean theorem to find the missing side. Use your diagram to find the missing trigonometric functions.)



Multiple Answer: For each of the following, choose the radian or angle measures that are correct. **Multiple correct answers per question are possible.**

(Hints: (Hints: Ask yourself the following questions: Is the value of the function positive or negative or zero? Which quadrant(s) does that function take on a $(+, -, 0)$ value? Draw a picture with triangles in those quadrants. Label the side given to you, then ask yourself what angle has that value for the given function? Write in the reference angles. Starting with the first answer, follow that degree or radian measure around from zero to see if you land on one of the triangles you drew. If so, circle that answer. Continue checking each answer choice as multiple answers are possible Remember, if the degrees or radians are negative, you must go around the circle backwards [clockwise].)

2. $\tan \theta = \sqrt{3}$

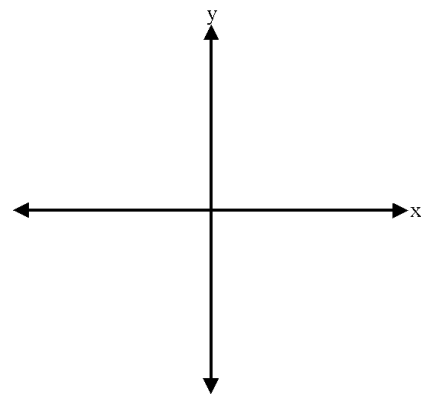
- a. -210° b. -120° c. 210° d. 240° e. 300°

3. $\cos x = -\frac{\sqrt{3}}{2}$

- a. $\frac{5\pi}{6}$ b. $\frac{2\pi}{3}$ c. $-\frac{2\pi}{3}$ d. $-\frac{7\pi}{6}$ e. $\frac{7\pi}{6}$

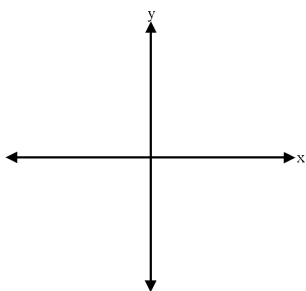
Review from Parts A and B. Look back at the hints provided if necessary.

4. If $\sin \theta = -\frac{1}{4}$ and $\tan \theta > 0$, find $\cot \theta$ and $\sec \theta$.

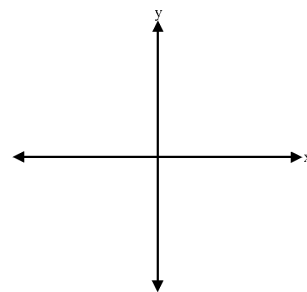


5. Find exact values for each of the following.

a. $\tan \frac{3\pi}{2}$



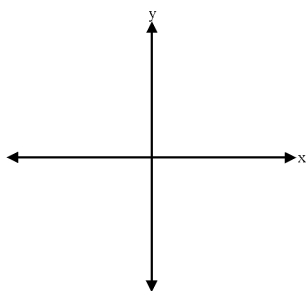
b. $\sec 210^\circ$



6. Evaluate $\csc \frac{2\pi}{3} - 3 \tan^2 210^\circ$.

7. For each of the following equations, ONE solution is given. Find the other solution, x or θ , on the unit circle that satisfies the given equation. $0 \leq x \leq 2\pi$ and $0 \leq \theta \leq 360^\circ$.

a. $\tan \frac{7\pi}{6} = \tan x$



b. $\sin 140^\circ = \sin \theta$

