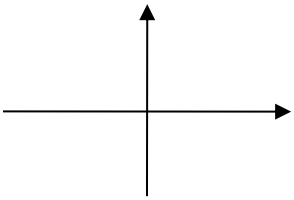
Math 41 Trigonometry Worksheet 1
Spring 2016

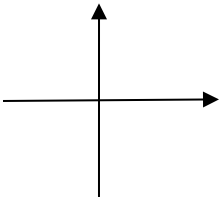
1. a. Draw the angle in standard position and convert the angle to degree measure.

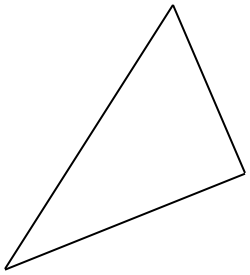
$\theta = \dfrac{11\pi}{6}$



b. Draw the angle in standard position and convert the angle to radian measure

$\theta = -135^\circ$





2. Use the right triangle to find each ratio of the angle, θ.

a. $\cos\theta$

b. $\cot\theta$

c. $\csc\theta$

3. Find the exact ratio of the special angle without a calculator:

a. $\sin 45^\circ =$

b. $\sec \frac{\pi}{3} =$

4. Draw a right triangle find the trig ratios given $\sin A = \frac{1}{4}$.

$\cos A =$

$\tan A =$

$\cot A =$

$\sec A =$

5. Find θ, $0^o < \theta < 90^o$, for each equation. Do not use a calculator.

a. $\sin \theta = \frac{1}{2}$

b. $\sec \theta = \sqrt{2}$

6. Find θ, $0 < \theta < \frac{\pi}{2}$, for each equation. Do not use a calculator.

a. $\cos\theta = \frac{1}{2}$

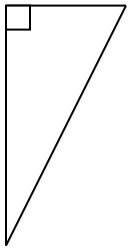
b. $\cot\theta = 1$

7. Find θ, $0 < \theta < \frac{\pi}{2}$, and $0^o < \theta < 90^o$ for each equation. Round to two decimal places.

a. $\cos\theta = 0.7528$

b. $\cot\theta = \frac{8}{5}$

8. Find angle *A* of the right triangle.



9. Patrick and SpongeBob leave Bikini Bottom airport in a ultra-light flying at a bearing of N 25° W flying at 20 mph. Find the distance north and the distance west of the airport Homer is three hours after leaving the airport..

10. Find the trigonometric functions of the angle θ whose terminal side passes through the point $(-1, 2)$.

$\sin\theta =$

$\cos\theta =$

$\tan\theta =$

11. Find trigonometric functions of θ satisfying the given conditions

$\sin\theta = -\frac{3}{8}$ and $\cos\theta > 0$.

$\cos\theta =$

$\tan\theta =$