

**Part 1: No calculators.**

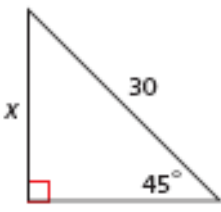
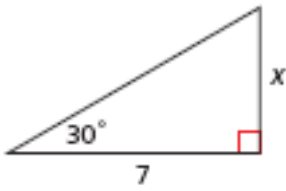
- Sketch an angle with degree measure  $-476^\circ$ . Find (a) the quadrant where the angle terminates, (b) the measure of the reference angle, (c) a positive angle coterminal with the given angle, and (d) a negative angle coterminal with the given angle.
- Sketch an angle with degree measure  $\frac{11\pi}{12}$ . Find (a) the quadrant where the angle terminates, (b) the measure of the reference angle, (c) a positive angle coterminal with the given angle, and (d) a negative angle coterminal with the given angle.
- (a) Convert  $260^\circ$  to radian measure in simplest form. (b) Convert  $\frac{11\pi}{4}$  to degrees.
- Draw triangles and find exact values in simplest form.
 

(a)  $\cos(-210^\circ)$       (b)  $\csc 675^\circ$       (c)  $\tan\left(\frac{-2\pi}{3}\right)$       (d)  $\sec\left(\frac{7\pi}{3}\right)$
- The terminal side of angle  $\theta$  in standard position passes through  $(-6, -5)$ . Draw a triangle and find exact values in simplest form for all six trig functions of  $\theta$ .
- Draw triangles and find angle measures in degrees and radians, or exact values in simplest form.
 

(a)  $\sin^{-1}\left(\frac{\sqrt{2}}{2}\right)$       (b)  $\tan^{-1}\left(\frac{-\sqrt{3}}{3}\right)$       (c)  $\cos^{-1}(\sin(-60^\circ))$

(d)  $\tan^{-1}\left(\cot\left(\frac{-5\pi}{4}\right)\right)$       (e)  $\sin\left(\cos^{-1}\left(\frac{2}{3}\right)\right)$       (f)  $\csc\left(\tan^{-1}\left(\frac{-2}{7}\right)\right)$
- Find all possible values of  $\theta$  in radians, in simplest form.
 

(a)  $\sin^{-1}\frac{\sqrt{3}}{2}$       (b)  $\tan^{-1}(-1)$
- Use a special triangle to find the value of  $x$ . Give exact answers in simplest form.
 

(a)  (b) 

**Part 2: Use your calculator.**

- Find the value of  $\theta$  that makes each statement true. Round angle measures to the nearest tenth.
 

(a)  $\sin \theta = 0.51$ , where  $90^\circ < \theta < 180^\circ$       (b)  $\cos \theta = -0.74$ , where  $180^\circ < \theta < 360^\circ$

(c)  $\tan \theta = -3.5$ , where  $90^\circ < \theta < 270^\circ$
- Find all six trigonometric functions of  $450^\circ$ .
- A biologist's eye level is 5.5 ft above the ground. She measures the angle of elevation to an eagle's nest on a cliff to be  $66^\circ$  when she stands 50 ft from the base of the cliff. To the nearest foot, what is the height of the eagle's nest?

