

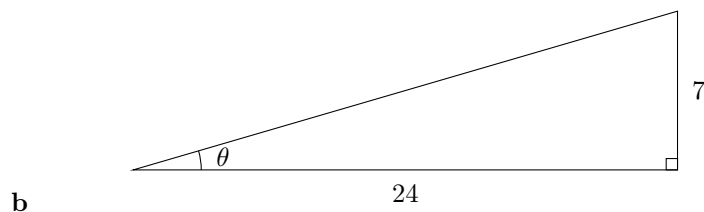
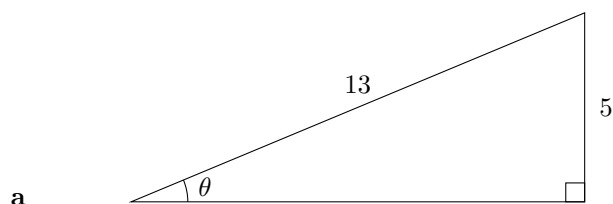
Math 1060 Assignment 2

Due September 11, 2014

Show all your work!!

Problem 1

Find the six trigonometric functions of θ for the following triangles:



Problem 2

Let θ be an angle so that $\sin \theta = 0.1$.

- a Find the possible values of $\cos \theta$.
- b Find the possible values of $\cos(\frac{\pi}{2} - \theta)$

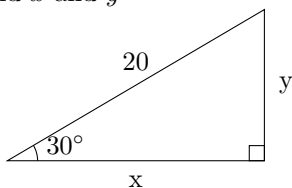
Problem 3

Let θ be an angle so that $\csc \theta = 5$.

- a Find the possible values of $\cot \theta$
- b Find the possible values of $\sec(\frac{\pi}{2} - \theta)$.
- c Find the possible values of $\sec(\theta)$

Problem 4

Find x and y



Problem 5

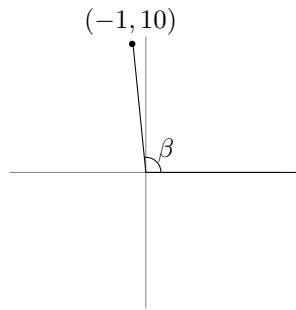
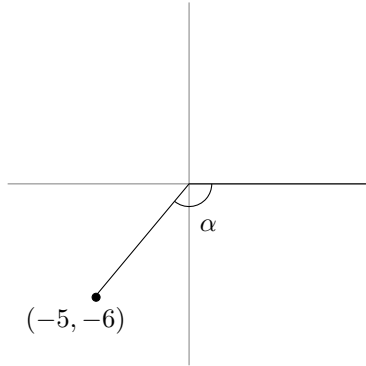
Prove that the following is true for all angles θ :

a $(1 - \sin \theta)(1 + \sin \theta) = \cos^2 \theta$

b $\tan \theta + \cot \theta = \tan \theta \cdot \csc^2 \theta$

Problem 6

Determine the six trigonometric functions of the following angles:



Problem 7

Find the six trigonometric functions of θ given that $\cos \theta = -\frac{1}{2}$ and $\sin \theta > 0$.

Problem 8

Find the six trigonometric functions of θ given that $\tan \theta = 5$ and $\cos \theta < 0$.

Problem 9

Prove that $\sin(30^\circ) = \frac{1}{2}$ and $\cos(30^\circ) = \frac{\sqrt{3}}{2}$. Show all your work!

Problem 10

Using reference angles, compute the sine and cosine of each of these angles. Show all your work! You may quote the values of sine and cosine at the angles 0° , 30° , 45° , and 60° .

a 210°

b 300°

c 135°