

Quiz 1

Math 253

Name:

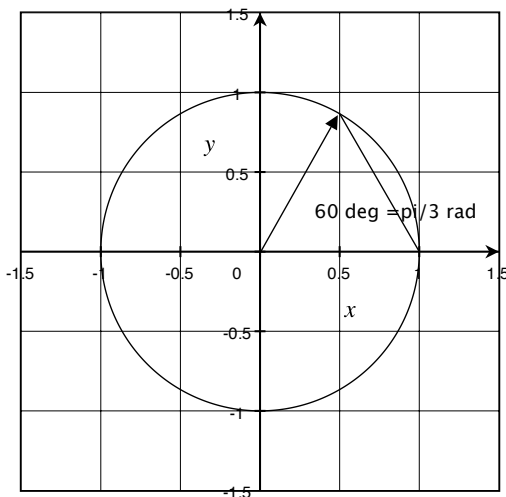
Show *all* your work (algebraically or geometrically) for each and simplify. No credit is given without supporting work.

1. [2] Explain when and why $\sqrt{1 + \tan^2 \theta} = \sec \theta$.

2. [3] In case you don't remember, consider the diagram below and then find the following:

$$\cos \frac{\pi}{3}$$

$$\sin \frac{\pi}{3}$$



3. [5] Use the facts from the front to find the length of the curve $\ln(\cos x)$ from $0 \leq x \leq \frac{\pi}{3}$.