

1060-2. STUDY GUIDE FOR EXAM 1

Exam 1 will be in lecture on Thursday, October 1. The material covered is in sections 4.1-4.6. It will be closed book, closed notes, and calculators will not be allowed. You are allowed one lettersize piece of paper with anything on it. You will have approximately 60 minutes for the exam.

This guide contains a checklist of important skills to learn before Exam 1. There is also a webwork assignment with some more examples.

Skills checklist:

- (1) Convert angle measures between degree form and radians.
- (2) Find arc length and sector area.
- (3) Find angular and linear speed.
- (4) The unit circle, definition of trigonometric functions.
- (5) Evaluate trigonometric functions at multiples of $\pi, \frac{\pi}{2}, \frac{\pi}{3}, \frac{\pi}{4}, \frac{\pi}{6}$.
- (6) Right triangle trigonometry, solve right triangles, word problems.
- (7) Fundamental trigonometric identities. Find one trigonometric function when you know another.
- (8) Definition of trigonometric function of an angle θ when you know one point (x, y) on the terminal side of the angle.
- (9) Graphs of sine and cosine functions: amplitude, period, phase shift, vertical shift. Be able to graph a given function (as in the quiz) or identify the function whose graph is given (as in webwork).
- (10) Graphs of tangent, cotangent, secant, cosecant.