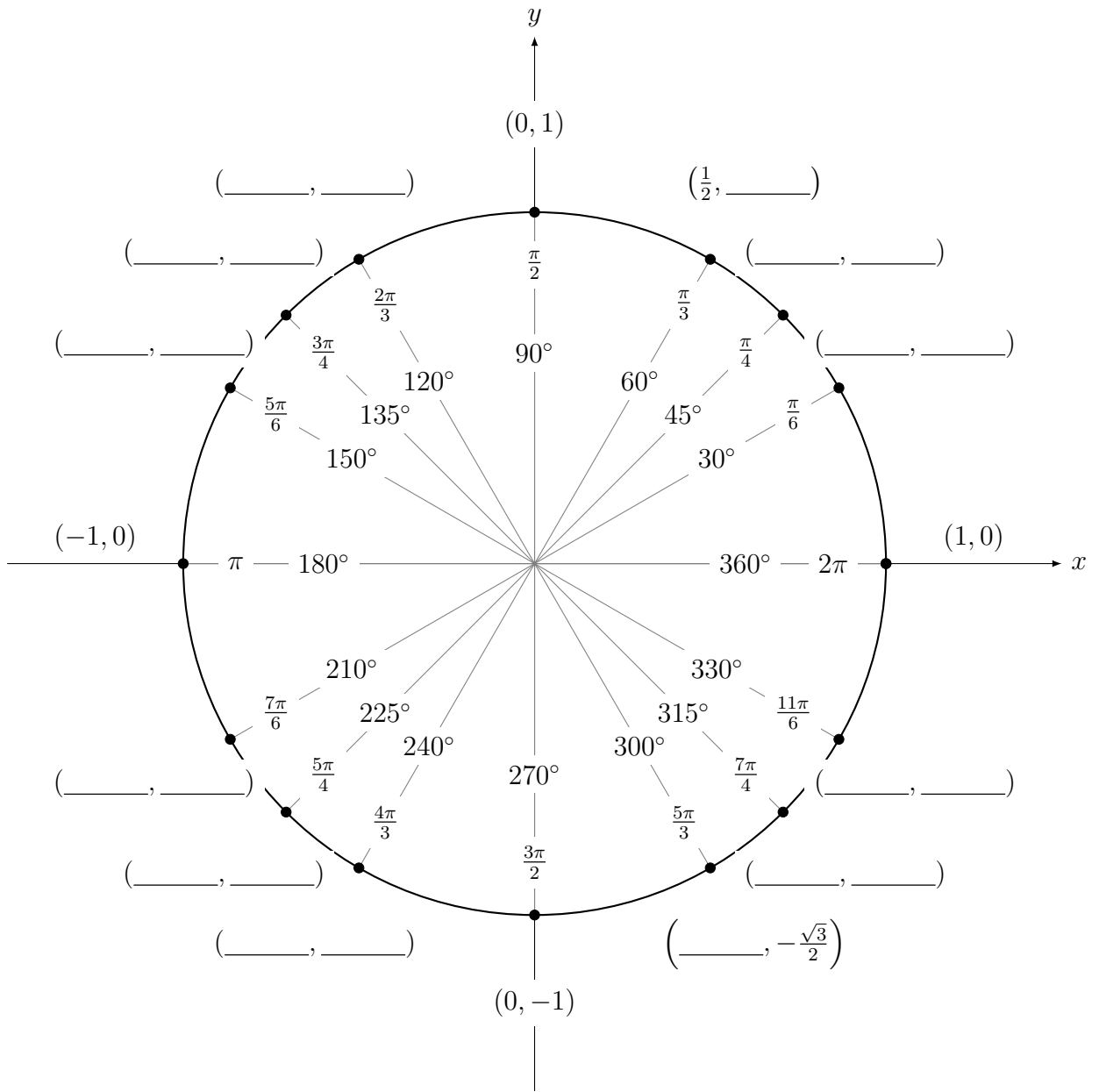


MATH 231: Calculus of Several Variables
Section 1, 107 Ag Sc & Ind Bldg,
TR 9:05 AM - 9:55 AM

Homework 1 (Review Assignment): Due Thursday, August 29

1. Read the Notes titled “Course Philosophy & Review” posted on the website.
2. Fill in the blanks (the values of cosine and sine) for the unit circle below.



3. Are the following equations true? Justify your answer

- $\tan x \sin x + \cos x = \sec x$
- $\tan^2 \theta = \csc^2 \theta \tan^2 \theta - 1$
- $\cos^2 t = \frac{\csc t \cos t}{\tan t + \cot t}$

4. Graph the following parametric equation

$$x = t^2 + t, \quad y = t^2 - t, \quad -2 \leq t \leq 2$$

5. Graph the following parametric equation

$$x = \cos^2 t, \quad y = 1 - \sin t, \quad 0 \leq t \leq \pi/2$$

6. Find the derivatives of the following

(a) $f(x) = \frac{\cos(x)}{1 + \sin(x)}$

(b) $y = \tan(\sin x)$

(c) $g(x) = \sec^3(x)$