

# Math 1316: 3-22 Worksheet

March 22, 2022

The point of these exercises is to get a handle on working and thinking with radians.

1. For the following angles given in radians, draw a circle and identify the portion of the circle corresponding to the angle. For each of these angles, what *fraction* of a circle do they give?

- $\pi$
- $2\pi$
- $\pi/2$
- $2\pi/3$
- $5\pi/4$
- $11\pi/7$
- $7\pi/3$

2. For the angles from the previous problem, convert them to degrees. Which angles are given as a whole number of degrees?

3. For the following pairs of angles, draw a circle and identify the portion of the circle corresponding to each angle. Then determine the sum of the two angles, written as a fraction of  $\pi$ .

- $\pi/3$  and  $\pi/3$
- $\pi/4$  and  $3\pi/4$
- $\pi/2$  and  $\pi/4$
- $2\pi/3$  and  $3\pi/4$
- $2\pi$  and  $3\pi/5$

4. For the following pairs of angles, draw a circle and identify the portion of the circle corresponding to each angle. Determine which of the two angles is larger, converting them to a common demoninator to check.

- $\pi/4$  and  $\pi/3$
- $\pi$  and  $9\pi/10$
- $3\pi/11$  and  $7\pi/15$
- $2\pi/3$  and  $3\pi/4$
- $4\pi/7$  and  $3\pi/5$