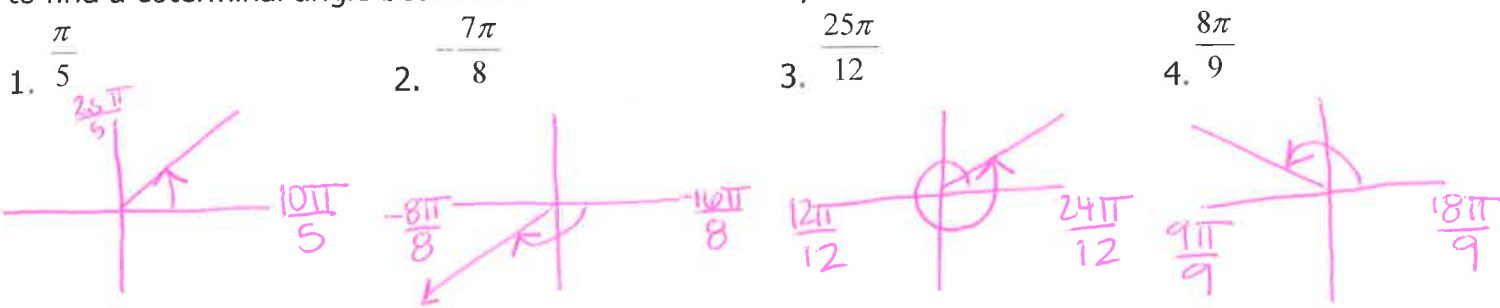


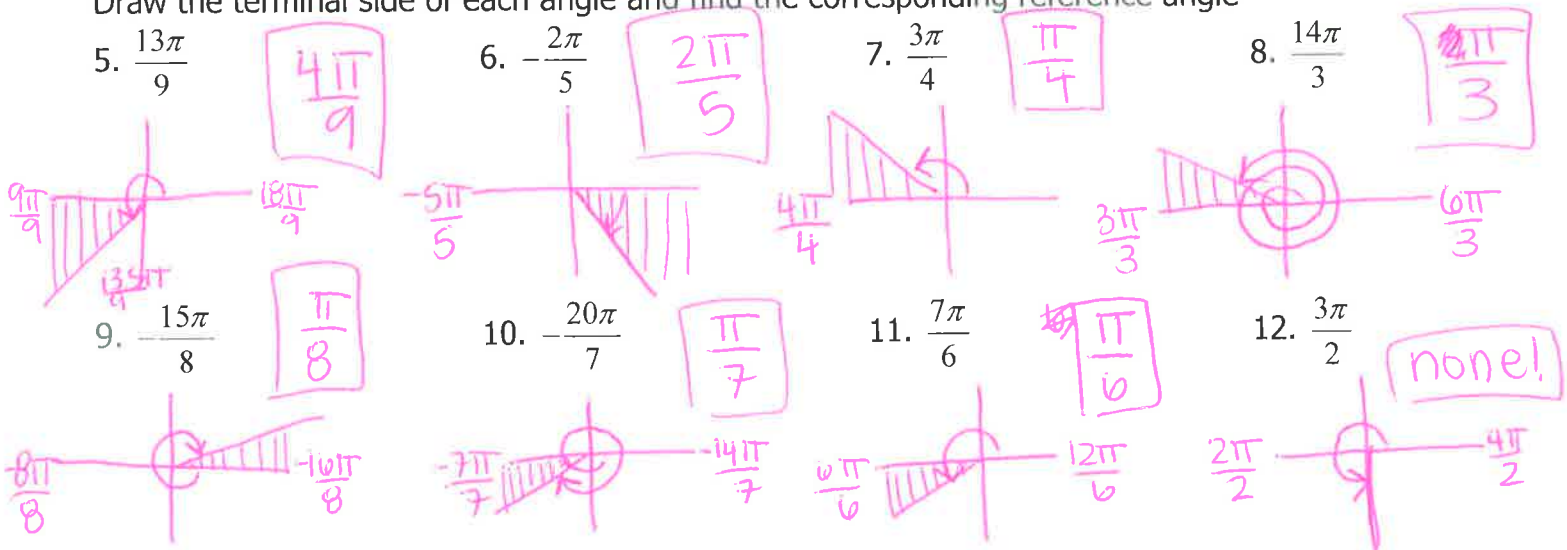
Name: key

Radians Day 2

Graph the following angles. Label π and 2π on your graph with a common denominator. Remember to find a coterminal angle between 0 and 2π if necessary.



Draw the terminal side of each angle and find the corresponding reference angle



13. A clothes dryer rotates 500 revolutions every minute. Determine its angular velocity in radians per second.

$\sim 52.360 \text{ rad/sec}$

$\left(\frac{50\pi}{3} \text{ rad/sec} \right)$

14. A bike wheel makes 1.8 revolutions in 5 seconds and has a radius of 25 inches. Determine its angular velocity and its linear velocity.

Angular: $\sim 2.262 \text{ rad/sec}$

Linear: $\sim 56.549 \text{ in/sec}$

15. The minute hand of a clock is 27 millimeters long. Find the linear velocity in millimeters per second.

$\sim 2.827 \text{ mm/sec}$

$\left(\frac{9\pi}{10} \text{ mm/sec} \right)$

16. Assume the hard drive on a computer is circular and rotates at 7200 revolutions per minute. What is the angular velocity in radians per minute? What is the linear velocity in inches per minute of a particle located 2 inches from the center of the hard drive? What is the linear velocity in miles per hour?

Angular: $\sim 45,238.934 \text{ rad/min}$

Linear: $\sim 90,477.868 \text{ in/min} \Rightarrow 5,428.672.105 \text{ in/hr}$

$\approx 85.680 \text{ mph WOW!}$