

M126 Worksheet 3.4 Linear and Angular Speed

Name _____

- 1) Use the formula $\omega = \frac{\theta}{t}$ to find ω in radians/sec. $\theta = \frac{\pi}{8}$ radian, $t = 11$ sec

- 2) Use the formula $v = r\omega$ to find the angular speed in radians/sec.
 $v = 10$ ft per sec, $r = 1.3$ ft

- 3) Find ω , the angular velocity in radians/min. for a spoke on a bike tire revolving 60 times per minute.

- 4) The radius of the tires of a car is 18 inches, and they are revolving at the rate of 673 revolutions per minute. How fast is the car traveling in miles per hour?

- 5) A ball on the end of a string is spinning around a circle with a radius of 5 centimeters. If in 5 seconds a central angle of $\frac{1}{18}$ radian has been covered, what is the angular speed of the ball?

Answer Key

Testname: WORKSHEET 3.4 LINEAR AND ANGULAR SPEED

- 1) $\frac{\pi}{88}$ radian per sec
- 2) 7.7 radians per sec
- 3) 120π radians per min
- 4) $\frac{2019}{88}\pi = 72.08$ mph
- 5) $\frac{1}{90}$ radian per sec