

## Angular Velocity

### Solve the following problems

1. If a person turns 1.5 radians in 3 seconds what is the angular velocity?
2. If a windmill rotates at 14 radians per second. What is its angular displacement in 30 seconds?
3. If cars tire is 20 radians per second how many complete rotations does it do each second?
4. (Walker, p. 300, #3) Find the angular speed of **(a)** the minute hand and **(b)** the hour hand of the famous clock in London, England, that rings the bell known as Big Ben.
5. (Walker, p. 300, #4) Express the angular velocity of the second hand on a clock in the following units: **(a)** rev/hr and **(b)** deg/min and **(c)** rad/s.
6. (Walker, p. 300, #5) List the following in order of increasing angular speed: an automobile tire rotating at  $2.00 \times 10^3$  deg / s, an electric drill rotating at 400.0 rev/min, and an airplane propeller rotating at 40.0 rad/s.

