Angular Velocity WS.

1. A wheel rotates clockwise 10 times per second. What is its angular speed?

b. What will be its angular displacement after 3 seconds?

c. What will be the tangential velocity of the outside of the wheel?

2. A 50 cm diameter wheel rotates through 25 radians. What distance will it move?

3. Find the angular velocity of a wheel that rotates at 120 rpm.

b. What will be the tangential velocity of the outside of the wheel if its radius is 25 cm?

4.   Find the angular velocity of a 40 cm radius wheel that is moving at 20 m/s.

b. How many times will this wheel rotate in 5 seconds?

5. A 0.3 m radius wheel rotates 5 times. What is its angular displacement? How far will it move?

6. Find the angular velocity of a wheel that rotates 6 times every 4 seconds.

b. What is the tangential velocity of the outside of the wheel if radius is 15 cm?

7. A 40 cm radius wheel is rotating at 20 rad/sec. How fast is this wheel moving across the ground?

b. How far (in meters) will this wheel move in 6 seconds?