

1. For each of the following, state whether it is an angle, an angular velocity, or an angular acceleration and convert it into proper SI units. (a) 37.0° , (b) $360^\circ/\text{day}$, (c) 1.20 rotations/minute, (d) 12.0rpm/s , and (e) 16.2 revolutions.
2. Look over these (<http://www.youtube.com/watch?v=1q7s4E94-No>) amazing pen spinning tricks! Suppose one of the pens is 25.0cm long and is spinning at 300rpm about its center of mass. Find (a) the angular speed of the pen in radians per second, (b) the number of rotations in 3.00s , (c) the linear speed of the tip of the pen, and (d) the total distance traveled by the tip of the pen in 3.00s .
3. After turning off a DVD player, the disc slows from 27.5rad/s to a stop at a constant rate of 10.0rad/s^2 . Find (a) the time needed to bring the disc to rest and (b) the angle through which it rotates.
4. A 82.0cm diameter roulette wheel spinning at 100rpm slows down to 30.0rpm after going around for 20.0 times. Find (a) the time this takes, (b) the average angular acceleration, (c) the centripetal acceleration of the green zero at this time, and (d) the tangential acceleration of the green zero.

