

## B Physics Interactive Quiz : Rotational dynamics

Name:

#	3	question	Answer			0 <--score
# 1	60	cm is the radius of two masses held in the hands of a spinning ice skater, each with velocity 4 m/s. If the radius were 1/4 of this, find the final v for the masses (ignore the mass of the skater).		16	100	0
# 2	15	kg is the mass of a bucket around a pulley. If the bucket falls 6 meters, and I for the pulley is 30, find the final w for the pulley (assume PE goes only into rotational KE)		7.6681	100	0
# 3	24	cm is the length of a wrench turning a bolt. If a force of 60 N were applied 90° to the handle, find the torque on the bolt.		14.4	100	0
# 4	24	Repeat with a force 45° from the axis of the wrench.		10.181	100	0
# 5	9	cm is the radius of a bicycle wheel that makes 18 revolutions at constant velocity. Find the distance covered by the wheel.		10.174	100	0
# 6	9	If this takes 8 seconds, find w		14.13	100	0
# 7	9	Find the angular acceleration		0.01	100	0
# 8	9	find the tangential acceleration		0.01	100	0
# 9	160	kg is the mass of a child on one side of a 6 meter long seesaw, with her brother of mass 40 kg on the other end. Find the net torque.		3528	100	0
# 10	160	If I = 30, find the angular acceleration of the system		117.6	100	0

**Extra Credit: Explain how helicopters preserve angular momentum in powered flight, including diagrams.**