

Recitation Instructor (circle one): Moe Larry Curly Groucho Chico Harpo

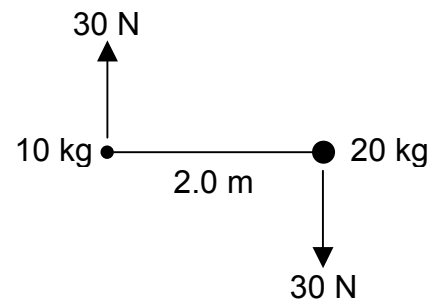
Class time (circle one): 10:30 11:30

QUIZ #8

- 1) A toy car going around a large circular track has a steadily increasing speed because of a tangential acceleration of 0.30 m/s^2 . At some point it passes a toy tree. Then, 10 s later, it passes the tree again going in the same direction as before and with a speed of 4.0 m/s. What is the radius of the track?

- 2) Two point masses resting on a frictionless table are connected by a massless rod. The structure is initially at rest, but a force is applied to each mass. As the structure rotates, the force directions remain perpendicular to the rod.

- (a) About what point does the structure rotate? (A good way to answer this is to specify the distance and direction from the 10 kg mass.)



- (b) What is the moment of inertia of the structure with respect to the axis of rotation?

- (c) How many revolutions has the structure rotated after one minute?

- (d) What is the speed of the 20 kg mass after one minute?