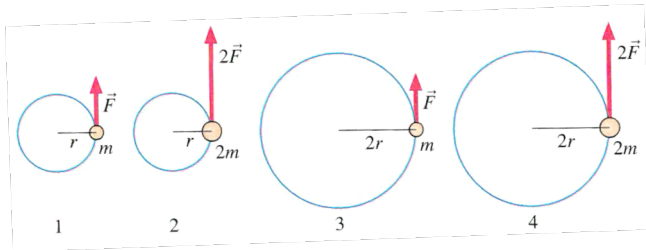


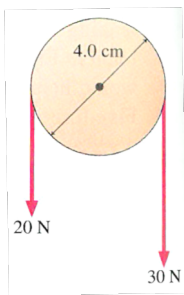
Torque Practice

Name: _____

1. Balls are attached to light rods and can move in horizontal circles as shown in the figure below. Rank in order, from smallest to largest, the torques τ_1 to τ_4 about the centers of the circles.

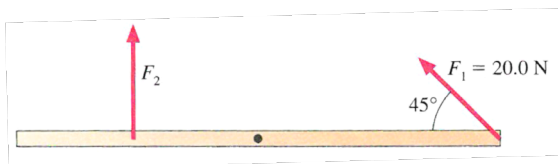


2. What is the net torque about the axle in the pulley pictured below?

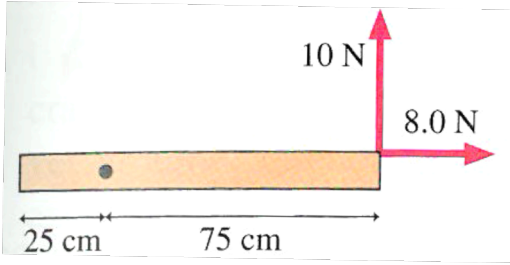


3. The tune-up specifications of a car call for the spark plugs to be tightened to a torque of 38 N*m. You plan to tighten the plugs by pulling on the end of a 25 cm long wrench. Because of the cramped space under the hood, you'll need to pull at an angle of 120° with respect to the wrench shaft. With what force must you pull?

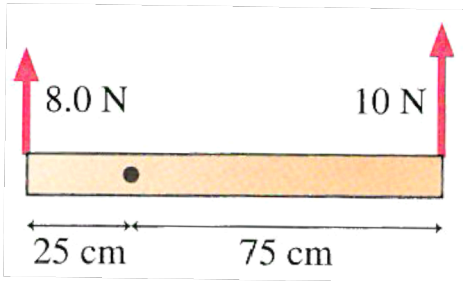
4. In the figure below, force F_2 acts half as far from the pivot as F_1 . What magnitude of F_2 causes the net torque on the rod to be zero?



5. What is the net torque on the bar shown below about the axis indicated by the dot?



6. What is the net torque on the bar shown below about the axis indicated by the dot?



7. What is the net torque on the bar shown below about the axis indicated by the dot?

