

Practice Problem Set 9

1 Ch.10 Q.48

A pulley 12 cm in diameter is free to rotate about a horizontal axle. A 200-g mass and a 470-g mass are tied to either end of a massless string, and the string is hung over the pulley. Assuming the string doesn't slip, what torque must be applied to keep the pulley from rotating?

2 Ch.10 Q.59

A potter's wheel is a stone disk 90 cm in diameter with mass 120 kg. If the potter's foot pushes at the outer edge of the initially stationary wheel with a 75-N force for one eighth of a revolution, what will be the final speed?

3 Ch.10 Q.62

A hollow ball rolls along a horizontal surface at 3.7 m/s when it encounters an upward incline. If it rolls without slipping up the incline, what maximum height will it reach?