HW 9-12 Soln)

For a round symmetric shape we might assume that I = γMR2.

$$ω\_{f}=600\frac{rev}{min}×\frac{1 min}{60 sec}×\frac{2π rad}{rev}=62.8 rad/sec$$

$$α= \frac{ω\_{f}-ω\_{i}}{t}=\frac{62.8-0}{3}=20.93 rad/s^{2}$$

$$I=\frac{τ}{α}= \frac{11.73}{20.93}=0.56$$

$$γ= \frac{I}{MR^{2}}=\frac{0.56}{7(0.4^{2})}=0.5003$$

We might suppose that the object is disk-shaped.