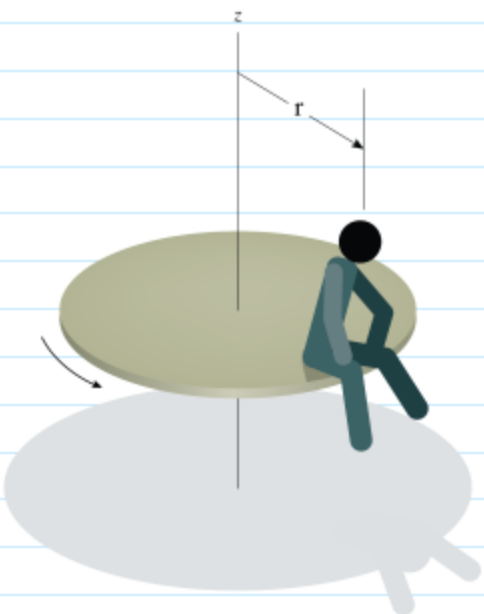
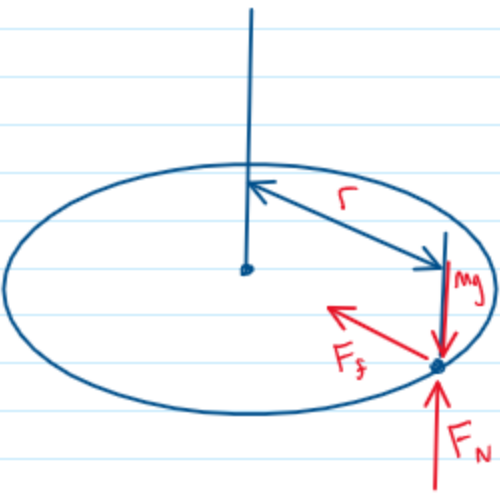


A person is sitting on a turn table that is spinning at an increasing speed.

If the speed reaches $\frac{V}{2}$ when the person falls off and the ratio of $F_f/F_N = \mu_s$, what is the radius of the turn table?



$F_F = \mu N$ $\quad N = mg$

$\frac{F_f}{N} = \mu$

$F_f = \mu mg$

$a_n m = \mu_s m g$

$\frac{v^2}{r} = \mu g$

$r = v^2/\mu g$