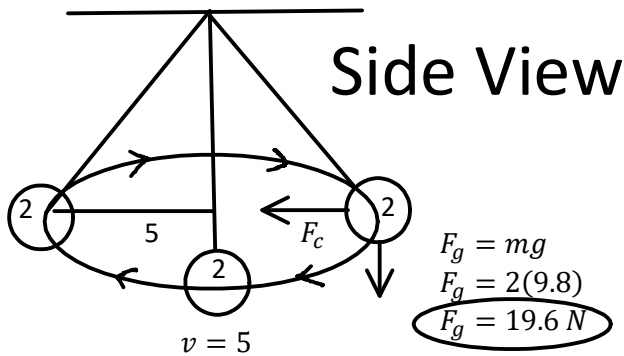


P12 - 7.9 - Pendulum/Airplane Notes

A 2kg ball travels $5 \frac{m}{s}$ at in a circle $r = 1 m$ on a 2m string. Find T. ...



$$F_g = mg$$

$$F_g = 2(9.8)$$

$$F_g = 19.6 N$$

$$F_c = \frac{mv^2}{r}$$

$$F_c = \frac{2(5)^2}{1}$$

$$F_c = 10 N$$

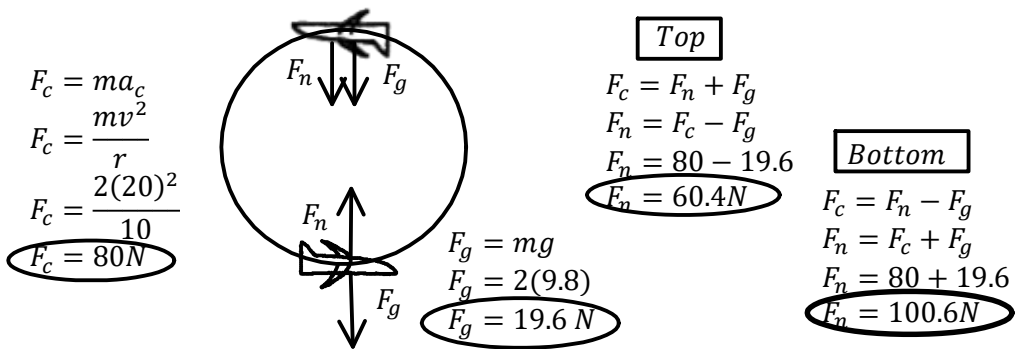
~~$$E_{ki} + E_{pi} = E_{kf} + E_{pf}$$~~
~~$$mgh = \frac{1}{2}mv_f^2$$~~

$$v_f = \sqrt{2gh}$$

$$v_f = \sqrt{(2)(9.8)(0.2)}$$

$$v_f = 1.98 \frac{m}{s}$$

A 2kg model plane travels $20 \frac{m}{s}$ at in a vertical circle $r = 10$. Find F_n on the pilot.



A 2kg model plane travels $20 \frac{m}{s}$ at in a vertical circle $r = 10$. Find F_n on the pilot.

