

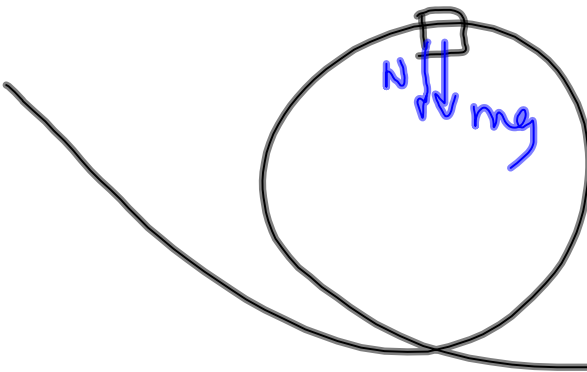
Spread out so that you're not sitting right next to someone.

Questions on MP?

HW Quiz @ ~12:40

Dec 6-11:43 AM

M.C.#5



$\sum F = ma_y$   
 ~~$N - mg = -\frac{mv^2}{r}$~~   
 $g = \frac{v^2}{r}$   
 $v^2 = rg$   
 $v = \sqrt{rg}$   
 $= (rg)^{1/2}$

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8.2

$$W = F d$$

$$F = \mu_k N$$

$$= \mu_k m g$$

$$= 0.23 (3.9 \text{ kg}) (9.81 \text{ m/s}^2)$$

$$F =$$

$$W = F d_1 + F d_2 + F d_3 + \dots$$

$$= F (d_1 + d_2 + d_3 + \dots)$$

$$= F (11 \text{ m})$$

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8.11

GIVEN:  $x$   
 $W$ 

$$W = \frac{1}{2} k x^2 \Rightarrow k = \frac{2W}{x^2}$$

③ GIVEN  $W$   
FIND  $x$

$$W = \frac{1}{2} k x^2$$

$$x = \sqrt{\frac{2W}{k}}$$

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8.24

$\Delta U_g = mg\Delta h$   
 $x = 1.2 \text{ m} \cos 35^\circ$   
 $= 0.98$   
 $\Delta h = 1.2 - 0.98$   
 $= 0.217 \text{ m}$   
 $\Delta U_g = mg\Delta h$   
 $= (0.28 \text{ kg})(9.8 \text{ m/s}^2)(0.217)$   
 $\Delta U_g = 0.60 \text{ J}$

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$$E_i = E_f$$

$$\cancel{U_{g_i}} + K_i = U_{g_f} + K_f$$

$$\cancel{\frac{1}{2}mv_i^2} = \cancel{mgh_f} + \frac{1}{2}m\cancel{v_f^2}$$

$$\frac{1}{2}v_f^2 = \frac{1}{2}v_i^2 - gh_f$$

$$v_f = \sqrt{v_i^2 - 2gh_f}$$

$$= \sqrt{(2.7)^2 - 2(9.81)(0.217)}$$

$$v_f = 1.74 \text{ m/s}$$

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8.15

$E_i = E_f$   
 ~~$U_{g_i} + K_i = U_{g_f} + K_f$~~   
 $\frac{1}{2} m v_i^2 = m g h_f + \frac{1}{2} m v_f^2$

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LOOP

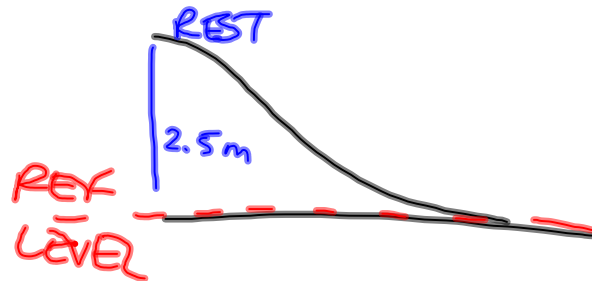
$U_{g_i} + \cancel{K_i} = \cancel{U_{g_f}} + K_f$   
 $mgh_i = K_f$   
 $v_f = \sqrt{rg}$  (FROM TEST Q)  
 $U_{g_i} = K_f$   
 $mgh_i = \frac{1}{2} m v^2$   
 $h_i = \frac{v^2}{2g}$   
 $h_{\text{TOTAL}} = h_i + 40m$

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8.29

$$E_i + W_{NC} = E_f$$

$$U_{g_i} + \cancel{K_i} + W_{NC} = \cancel{U_{g_f}} + \cancel{K_f} \rightarrow V_f$$



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