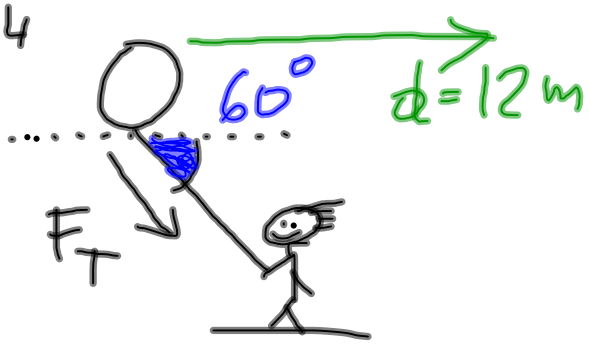
TEST #4

MC 7)



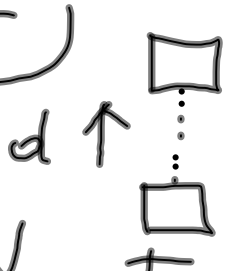
$W = F \cdot d \cdot \cos\theta$

$W = (1)(12) \cdot \cos(60°)$

$W = 6\ J$

Jan 16-9:24 AM

MC 25)



$F_A = F_g = m \cdot g$

$P = \frac{W}{t} = \frac{F \cdot d \cdot \cos\theta}{t}$

$P = F \cdot V$

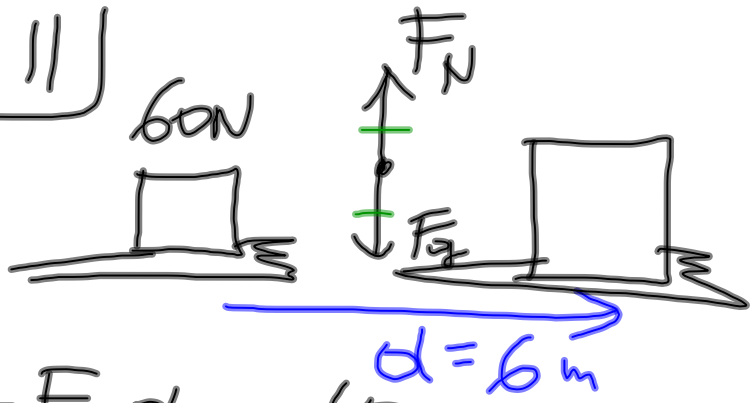
$P = mgV$

$P = (2)(9.8)(2)$

$P = 39.2\ W$

Jan 16-9:28 AM

MC 11



$W = F \cdot d \cdot \cos(\theta)$ $\theta = 90°$

$W = 0$ $\cos(90°) = 0$

Jan 16-12:40 PM

MC 4

$KE = \frac{1}{2} m v^2$

$KE = \frac{1}{2}(0.135)(40)^2$

Jan 16-12:44 PM

FR Conservation of E ① → ③

a) $ME_1 + W_{23} = ME_3$

$KE_1 + PE_{g_1} + W_{23} = KE_3$

$\frac{1}{2}mv_1^2 + mgh_1 + W_{23} = \frac{1}{2}mv_3^2$

$W_{23} = -28{,}875\ J$

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b) $W_{23} = F_{F_K} \cdot d_{23} \cdot \cos(180°)$

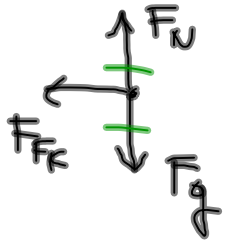
$-28{,}875 = F_{F_K} \cdot (50)(-1)$

$F_{F_K} = 577.5\ N$

c) $F_{F_K} = \mu_K \cdot F_N$ OR $\mu_K = \frac{F_{F_K}}{F_N}$

$\mu_K = \frac{577.5}{(70)(10)}$

$\mu_K = 0.83$



Jan 16-9:34 AM

MIDTERM

PART III ESSAY.

REQUIRED ELEMENTS:

1) FBD OR/AND A SKETCH

2) FORMULA/DERIVATION/CALCULATIONS

3) WORD SUMMARY GUIDES READER THRU 1 & 2 & ANSWERS THE QUESTION.

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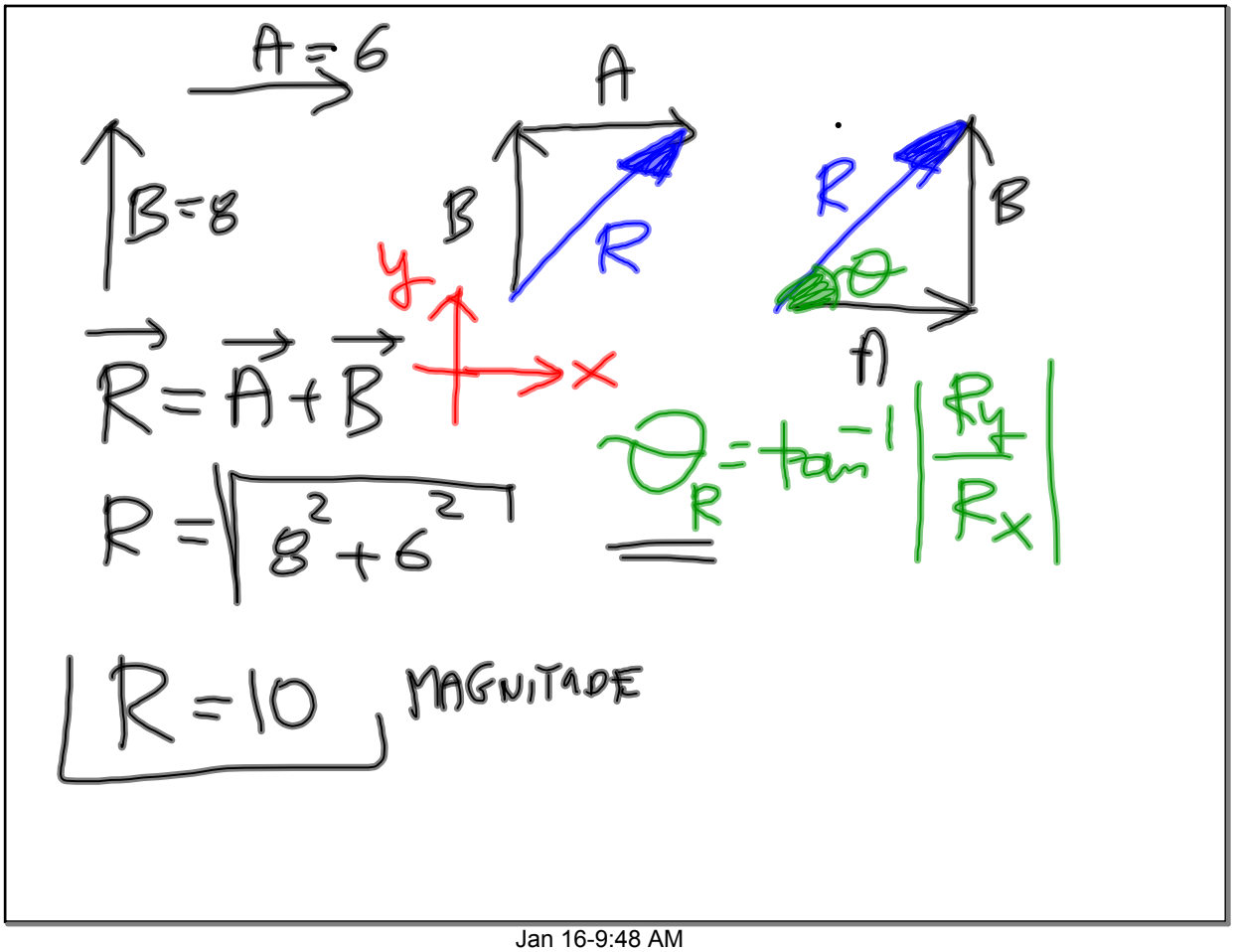
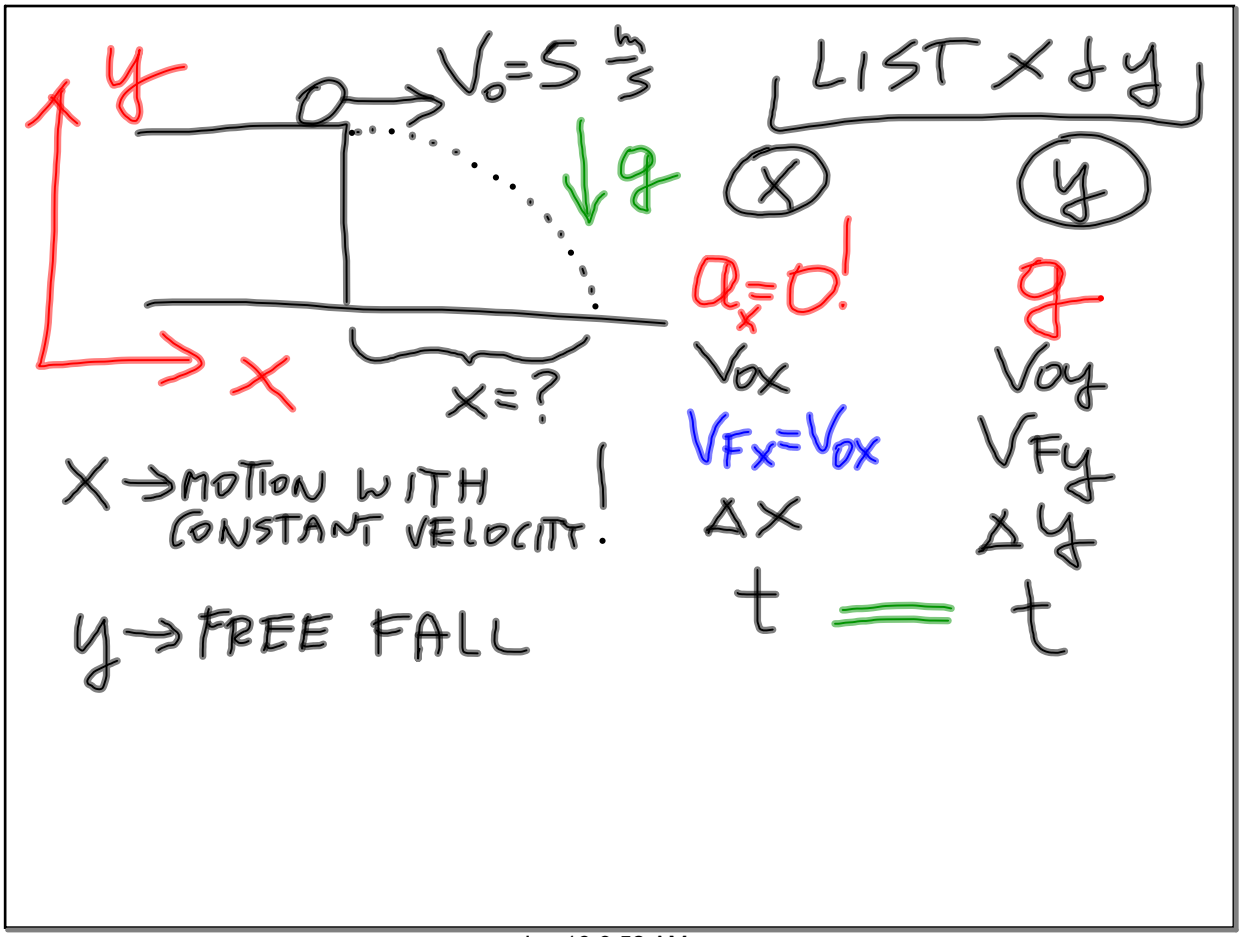
DIMENSION	BASIC SI UNIT IN PHYSICS
MASS	kg
LENGTH	m
TIME	s

Jan 16-9:45 AM



Jan 16-9:48 AM



Jan 16-9:52 AM

Newton's Laws of Motion.

1st. $\Sigma F_x = 0$, $\Sigma F_y = 0$ $\Big\} F_{Net} = 0$ → AT REST; → V = CONST.

2nd. $\Sigma F_{net} \neq 0 \Rightarrow a \neq 0$

$$a = \frac{F_{Net}}{m}$$

$$\Sigma F = m \cdot a$$

3rd. $F_{AB} = -F_{BA}$

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