Physics 112

Tuesday, January 19/16

http://mvhs-sherrard.weebly.com/

Textbook - ISBN

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1. Review Problem #5

2. Test U3 - Attempt #2 - Wednesday
   - Be able to show assigned work completed.
   - Show corrections for attempt #1.
   - Try version #2 and get checked.
3. Worksheet - Refraction

4. Sample MC/Questions/Problems - Waves (MC #1 -> B)

5. Exam - Review Problems (84)

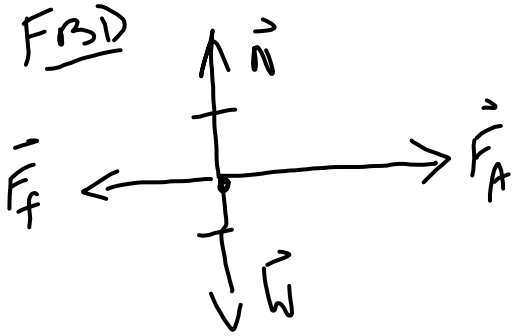
6. Review - Multiple Choice

Review Problem #5 - Jan. 19/16

What is the acceleration of a 68.0kg crate that is pushed across the floor by a 425 N force, if the coefficient of friction between the crate and floor is 0.500?

Include an FBD for the box.

FBD



$N = W$

$F_A \neq F_f$

$W = mg$

$F_f = \mu N$

$$\vec{F}_{net} = m\vec{a}$$

$$+F_A - F_f = m(+a)$$

$$F_A - \mu N = ma$$

$$F_A - \mu W = ma$$

$$F_A - \mu mg = ma$$

$$a = \frac{F_A - \mu mg}{m}$$

magnitude $\rightarrow$ $a = 1.35\ m/s^2$

The acceleration is $1.35\ m/s^2$, right.

Physics 122
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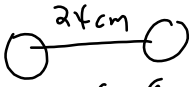
1. Handout: Charge and Coulomb's Law
   Textbook: Page 638, #4-5
   Textbook: Page 646, #11-14
   Textbook: Page 655, #20-24
   ] Electric Field.
2. Electric Potential Energy
3. Electric Potential Difference
4. Electric Current
5. Circuit Symbols
6. Types of Current
7. Open and Closed Circuits

8. Ohm's Law
9. Series Circuits
10. Textbook: Page 719, #27-31

Worksheet - Coulomb's Law



$F = 72\ N$

$q_1 = 3q$ $q_2 = q$ $3q = ?$

$r = 24cm = 0.24m$

$$F = \frac{k q_1 q_2}{r^2}$$

$$F = \frac{k (3q)(q)}{r^2}$$

$$F = \frac{k (3q^2)}{r^2}$$

$q = $ C

#5.

q_1
q_2
$r = d$
F

$$F = \frac{k q_1 q_2}{r^2}$$

$$F = \frac{k q_1 q_2}{d^2}$$

a)

$$F_{n\,new} = \frac{k q_1 q_2}{(2d)^2}$$

$(\frac{1}{2}d)^2$

$$F_n = \frac{1}{4}\frac{k q_1 q_2}{d^2}$$

$\frac{1}{4}d^2$ (4)

Science 10

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1. Article: Keeping Threatened Amphibian Species Afloat
   5 Days Late

2. Last Quiz - Biodiversity -> Paradigm Shift

3. Practice Exam - Attempt All Multiple Choice - HW
