Physics 112

Thursday, November 1/18

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1. Submit/ Return -> FA - Types of Forces and Weight Problem
   FA - Free Body Diagrams
   FA - First Law Problem

2. Newton's Second Law of Motion - Continue

3. Worksheet Packet - Second Law Problems - Work Block Tomorrow

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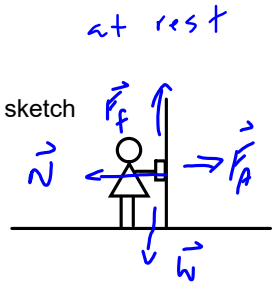
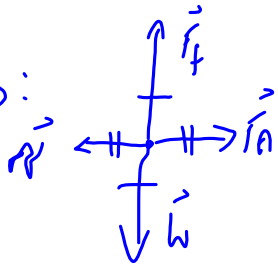
Formative Assessment – First Law Problem (D2.4)

A student on planet Luvfizics presses a 1.7 kg textbook against a vertical wall. The student applies a force of 51 N in order to prevent the textbook from sliding down the wall. What is the acceleration due to gravity on LuvFizics? Include a labelled FBD for the textbook. $\vec{g}=?$



Surfaces	μ_s	μ_k
textbook and wall	0.284	0.196

FBD:



✓ $F_A = N$ } true in this case.
✓ $F_f = W$ }

✓ $W = mg$ } always true
✓ $F_f = \mu N$ }

Option 1:

$W = mg$

$F_f = mg$

$\mu N = mg$

$\mu F_A = mg$

$g = \frac{\mu F_A}{m}$

Option 2:

$F_A = N$

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

$F_A = \frac{W}{\mu}$

$F_A = \frac{mg}{\mu}$

$g = \frac{\mu F_A}{m}$

$g = \frac{(0.284)(51)}{1.7}$

$g = 8.5\ m/s^2$

* The acceleration due gravity is $8.5\ m/s^2$ down.

Physics 122

Thursday, November 1/18

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1. SA - U1 S3&4 - Relative Velocity and Collisions/Explosions

Science 10

Thursday, November 1/18

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1. FA - Identifying Types of Reactions and Balancing
   FA – Translating Reactions
   FA - Predicting Products

2. Review SA - Chem #3

3. SA - Chem #3 - Date: Friday, Nov. 2

Topics: SA - Chem #3

H

1. ionic compounds - electrically neutral
2. be able to write the names of simple binary ionic compounds given their formulas and vice versa
3. be able to write the names of ionic compounds containing polyatomic ions given their formulas and vice versa
4. know the roman numerals 1-10
5. be able to write the names of ionic compounds containing multivalent metals given their formulas and vice versa
6. be able to write the names of ionic compounds containing multivalent metals and polyatomic ions given their formulas and vice versa
7. molecular compounds = covalent compounds = molecules
8. prefixes 1-10
9. diatomic molecules: H_2, N_2, O_2, F_2, Cl_2, Br_2, I_2
10. special molecules: P_4, S_8, water, ammonia, hydrogen peroxide
11. be able to write the names of binary molecular compounds given their formulas and vice versa
12. identify ionic compounds and molecular compounds
13. define chemical reaction
14. identify reactants and products
15. be able to state the Law of Conservation of Mass
16. be able to balance chemical reactions
17. be able to identify the five types of reactions (formation, decomposition, single replacement reactions, double replacement reactions and combustion reactions)
18. be able to translate sentences and/or word equations to balanced chemical equations
19. be able to predict the products of chemical reactions.