

**Week #11**

**November School Wide Memory Verse:**

*He redeemed us in order that the blessing given to Abraham might come to the Gentiles through Christ Jesus, so that by faith we might receive the promise of the Spirit. Galatians 3:14*

**Topics/Content/Skills: Free body Diagrams, Friction, Time of flight.**

**Skills:**

- Understands how to calculate the time it takes something to fall ( without Friction).
- Knows how to make a free body diagram, using vertical and horizontal forces only, and add friction.
- Learn what a Normal force is, and the equation for Static and Kinetic Friction.

**Vocabulary/Key Terms/Formulas:**

Free body diagram, Friction, Coefficient of static and kinetic sliding friction, Normal Force, Time of flight,

**Homework/Classwork: (All homework is due the next class day unless indicated.)**

	<b><u>In Class</u></b>	<b><u>Homework Due in this Class</u></b>
<b><u>This Monday</u></b>	<u>Prezi Presentations(DEAR Time)</u>	Hmwrk sheet Prezis due
<b><u>Tuesday</u></b>	<u>Inquiry based Lab (In class)</u>	Hmwrk Sheet #31 Mastery Review Practice &EMAIL YOUR PREZI IF YOU HAVE NOT DONE THAT YET!!!
<b><u>Wednesday</u></b> <u>Not HS1</u>	<u>Mastery Work</u>	Hmwrk sheet #32 The rest of the Mastery Review Practice
<b><u>Thursday</u></b> <u>HS1 Double</u>	<u>Mastery Round Robin-Certification (Assessment) &amp; Khan Academy (HS1)</u>	Hmwrk sheet #33 Topic Mastery Review
<b><u>Friday</u></b>	<u>No Class on Fridays</u>	<u>NA</u>
<b><u>Next Monday</u></b>		#34 Writing and Review Questions/ Finish any unfinished work...

**Tests/Due Dates: There will be No quiz this week, only Mastery work.**

**Mastery Topics:** Equation Circles, Conversions, Solving for trig questions, REVIEW of all other Material so far: \_Density, Perimeter/Circumference, Area ( rectangles, circles), volume (rectangular prisms, Spheres) , Scientific notation, Vectors & components, Pugging into equations, *1-2 Step Algebra problems, STEM Review, Extra ordinary Review, Graphs of DVAJ, Basic Trigonometry, Atwood Machines.*

**Special Events/News:**

The Towers Are coming Nov. 22, 2011, will be our Tower competition for 2011.

**Extraordinaries/Mastery Review Topics:**

Summations, 15%, DVAJ, Trigonometry, Base 2, Imaginary numbers and powers.

NAME: \_\_\_\_\_ GRADE: \_\_\_\_\_

# #31& 32 CFAPCA PHYSICS I MASTERY



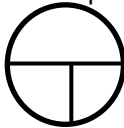
## CHECK OFF SHEET 1

Showin' off what you know –  
Somebody's always looking!

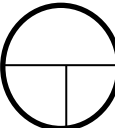
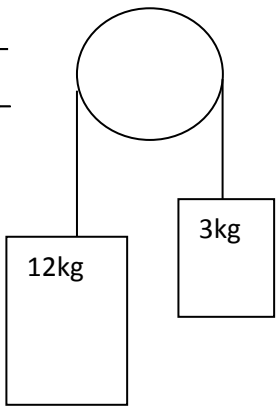
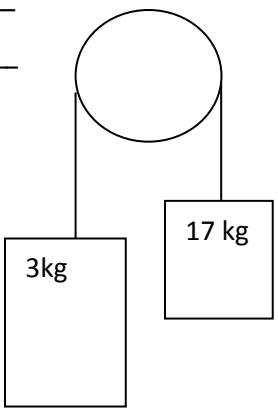
\* DENOTES MEMORY FLASH CARD TOPIC

	<b>Topic</b>	<b>Example</b>	<b>Mastery or Cert.</b>	<b>Initial</b>
1. *	Shapes	Name a 17 sided-3 dimensional figure:		
2. *	Numbers	What is the name of the number 2 followed by 34 zeros		
3. *	Roman Numerals	Write the number 2129 in Roman numerals		
4.	Scientific Notation	a. $3.05 \times 10^{-8} =$ _____ b. 9,032,000,000 =		
5. *	12 Items In The Solar System	a. _____ b. _____ c. _____ d. _____ e. _____ f. _____ g. _____ h. _____ i. _____ j. _____ k. _____ l. _____		
6.	Sigma	$\sum_{i=3}^{i=8} (2i - 3) =$		
7. *	4 States of Matter	a. _____ b. _____ c. _____ d. _____		
8. *	4 Layers of The Earth	a. _____ b. _____ c. _____ d. _____		
9. *	3 Types of rock	a. _____ b. _____ c. _____		

10.	Minerals	Name 4 Minerals a. _____ b. _____ c. _____ d. _____		
11. *	5 Types of Living Things	a. _____ b. _____ c. _____ d. _____ e. _____		
12. *	7 Characteristics of Living things	a. _____ b. _____ c. _____ d. _____ e. _____ f. _____ g. _____		
13.	15 Percent	What are the 3 steps for 15% a. _____ b. _____ c. _____ What is 15% of 864?		
14. *	Body Parts	Know spleen, liver, pancreas, lungs, heart, gall bladder, large & small intestines, kidneys, adrenal glands, etc. by sight and function.		
15. *	Bones	Know major bones, and some minor ones as well- Stirrup for example.		
16.	Slopes (DVAJ)	$D = 5t^3 - 3t^2 + 4t - 7$ $V(t) = \underline{\hspace{2cm}}$ $V(1) =$		
17.	Resistor Code	Gold Red White Blue=		
18. *	Speed of Sound And Light	Speed of sound= _____ C=		
19. *	Atoms	Know atomic symbols and #'s of first 20 atoms, atomic mass number of Carbon, Nitrogen, Oxygen, Hydrogen and Helium, parts of an atom, quarks, electrons, etc.		
20.	Electrons shells	See practice sheet To be handed out later		
21.	Half Life	See practice sheet To be handed out later		
22.	Atomic Number & Mass	Determine the number of neutrons in an isotope of an element. Ex. How many Neutrons are in Carbon 13?		

23. *	5 Layers of The Atmosphere	a. _____ b. _____ c. _____ d. _____ e. _____		
24. *	Types of Clouds	Name 3 types of clouds a. _____ b. _____ c. _____		
25. *	Phenomena Weather	Name 3 types of Phenomena a. _____ b. _____ c. _____		
26.	Trig, Label Function	Describe how to do a trig problem:		
27.	KFC Temperature Conversion	Can fill in blank KFC chart for Absolute zero, Water freezing, Melting, Room temperature, Body temperature, water boiling		
28.	Estimate Celsius To Fahrenheit	Estimate the Temp in F if the temp is 40° C:		
29. *	Identifying S Wave Parts	Know Crest, trough, amplitude & wavelength and frequency of a wave.		
30.	Speed, Frequency, Etc.	The equation for the speed of a wave is: _____		
31.	R Parallel and R Series, Circuits	What stays the same in Parallel : and what stays the same in Series:		
32.	Elec. Eqn Circ. Volt, Power	Equation for Electric power: 		

**HMWRK #33**  
**THE WEEK'S 15**

<p><b><u>Kinematics</u></b></p> <p style="text-align: center;"><b><u>Fill in</u></b></p> 	<p>1. Flo and Eddie the orangutans are in the same tree in a thick forest. Flo swings eastward at 3m/s, and Eddie swings at 4m/s West.</p> <p>A. How far is has Flo traveled after 1 minute? _____</p> <p>B. How far has Eddie moved in 30 seconds? _____</p> <p>C. About how far is Flo from Eddie after 45 seconds? _____</p>	<p>2. After a few minutes of swinging, Flo and Eddie, decide to race back to the tree. At this point they are both the same distance from the tree. Flo can "run" at 2 m/s, and she runs 40 m to the tree .</p> <p>A. How long does it take for her to get there? _____</p> <p>B. Bonus: She beats Eddie by 1 second, how fast was he going? _____</p>
<p><b><u>Atwood</u></b></p>	<p>4.</p> <p>A. <math>A=</math> _____</p> <p>B. <math>T=</math> _____</p> 	<p>5.</p> <p>A. <math>A=</math> _____</p> <p>B. <math>T=</math> _____</p> 
<p><b><u>2<sup>nd</sup> Law</u></b></p>	<p>7.</p> <p>A force <math>F_1</math> pushes on an object of mass 20 kg with a force of 150 N to the right. A force <math>F_2</math> pushes on the same object with a force of 180 N to the left. What is the acceleration of the object?</p>	<p>8. A force <math>F_1</math> pushes on an object of mass 40 kg with a force of 250 N to the right. A force <math>F_2</math> pushes on the same object with a force of 370 N to the left. What is the acceleration of the object?</p>
<p><b><u>Misc. incl. Lit Problems</u></b></p>	<p>9. <math>D+E = F</math></p> <p>Solve for E</p> <p>Solve for D</p>	<p>10. <math>D^2+ E^2=F^2</math></p> <p>Solve for F</p> <p>Solve for D</p>

Name/ Grade: \_\_\_\_\_ / Date: \_\_\_\_\_

HMWRK #34  
WRITE IT DO IT PRACTICE...

1. What did these people invent, and why are they important:

a. Patricia Bath

\_\_\_\_\_

\_\_\_\_\_

b. Angel Alcala

\_\_\_\_\_

\_\_\_\_\_

c. Joseph Woodland and Bernard Silver

\_\_\_\_\_

\_\_\_\_\_

d. George Smith and Willard Boyle

\_\_\_\_\_

\_\_\_\_\_

e. Dr. John Pemberton

\_\_\_\_\_

2. Describe to a 2<sup>nd</sup> grader how relative velocities work (hint you can use a train):

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