



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: Circular Motion Revisited/ Electricity begin

Skills:

- More Practice with Circles
- More Review of Electricity, Circuits, Capacitors, magnets

Vocabulary/Key Terms/Formulas:

Period, FBD, Statics, Time of Flight, Constant Acceleration, Kinematics(d_f eqn), Projectile motion, Components of forces, Vectors, Circular motion ($F_c = mv^2/r$;direction of A and V), Torque ($r \times F = \tau$; Review), Impulse ($F \Delta t = \Delta P$), Period of a pendulum

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

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

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

Test Topics: Dynamics, Statics, Projectile motion, Pendulums & Spring Periods, Plus Vector Components, Circular motion, Kinematics, Torque, Impulse, Atwood machines, 1-2 Step Algebra problems, STEM Review, Extra ordinary Review, Graphs of DVAJ, Basic Trigonometry.

Special Events/News:

The Towers are coming... Nov. 22 See sheets for Details.

There will be an Extra help session on Tuesdays at Lunch time. Those who need help or just want to get ahead are encouraged to come!

NAME: _____ GRADE: _____



#31& 32 CFAPCA PHYSICS I MASTERY

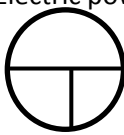
CHECK OFF SHEET 1

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

* DENOTES MEMORY FLASH CARD TOPIC

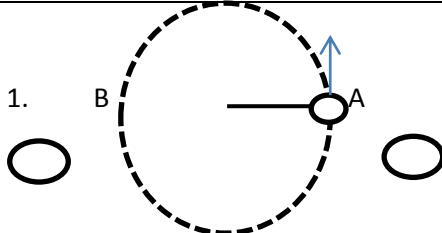
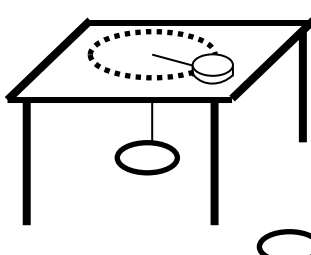


	Topic	Example	Mastery or Cert.	Initial
1. *	Shapes	Name a 17 sided-3 dimensional figure:		
2. *	Numbers	What is the name of the number 2 followed by 34 zeros		
3. *	Roman Numerals	Write the number 2129 in Roman numerals		
4.	Scientific Notation	a. $3.05 \times 10^{-8} =$ _____		
		b. 9,032,000,000 =		
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 1. _____ 2. _____ 3. _____		
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: 		

NAME/ GRADE: _____ / _____ DATE: _____

HMWRK #33
THE WEEK'S 15

Circular Motion	<p>1. </p> <p>a. A 0.5 kg weight is moving in a horizontal circle(radius of 0.25 m at 3m/s as it moves on a string. Draw the FBD of the object (side view) when it is at point A and point B. Use the weights closest to those points to draw the FBD's.</p> <p>B. What is the magnitude of the Tension on the string at point A?</p>	<p>2. A1 kg puck is moving in a circle of radius 0.5m at 4 m/s on a frictionless table holding up an unknown mass.</p> <div style="text-align: right;">  </div> <p>a. Draw the FBD of the puck moving in a circle on the table Use picture above the table.</p> <p>b. Draw an FBD of the weight under the table Use picture here.</p> <p>c. What is the tension in the string? _____</p> <p>d. What is the mass being held up? _____</p>	
Projectiles	<p>3.</p> <p>a. What is the magnitude of the momentum of the ball in problem 1 at any instant? _____</p> <p>b. What is the energy of the ball in problem 1? _____</p> <p>c. What is the magnitude of angular momentum of the ball in problem 1? _____</p>	<p>4. A. What is the period of the ball in problem 1? _____</p> <p>B. What is the frequency of the ball in problem 1? _____</p>	<p>5. If the horizontal circle in problem 1 is now a vertical circle, Draw the weight at the top of the circle here:</p> <div style="text-align: center;">  </div> <p>Draw the FBD of the weight at the top of the circle here:</p> <div style="text-align: center;">  </div>
Statics/ Torques	<p>6. On a balanced see saw, 2 MS boys one weighs 170 lbs at 1m and the other is 2 m to the right of the fulcrum . They have a 210 lb HS friend who is 2m from the left of the fulcrum. How much does the other MS boy weigh?</p> <p>Draw a picture of what is happening here:</p>		
Springs/ Pendulums	<p>7. <u>A. a Spring with spring constant 40N/m, and a mass of 300 kg hanging on it is stretched 1m from equilibrium. What is the period?</u></p> <p><u>B. A Pendulum with length 10m, and a bob of 200 kg is on the earth. What is the period?</u></p>	<p>8. <u>What mass is on a spring that is naturally stretched by the mass 0.1 m with spring constant of 0.4N/m?</u></p> <p><u>Draw what is going on here:</u></p>	
Misc. incl. Lit Problems	<p>8. $Ax + By = Cx$</p> <p>Solve for y</p> <p>Solve for x</p>	<p>9. $M_1g + M_1h = Kx^2$</p> <p>Solve for g</p> <p>Solve for h</p>	

Name/ Grade: _____ / Date: _____

HMWRK #34

WRITE IT DO IT PRACTICE...

1. What did these people invent, and/ or what famous law are they known for, why are they important:

a. Michael Faraday _____

b. James Clerk Maxwell _____

c. Georg Simon Ohm _____

d. Gustav Kirchoff _____

2. Describe to a 2nd grader the difference between voltage and current.

Explain to a 3rd grader what electric power Works.

