

Weekly Sheet for MS1/ HS1a PHYSICS
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Week #13

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, etc.

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>Final TOWER Work</u> <u>Tower Registration</u>	<u>#38 HAND IN</u>
<u>Tuesday</u>	<u>Tower BREAK!</u>	<u>HMWRK SHEET #39 HAND IN!</u> Take Home Mastery work (Towers should be done) <u>Please Hand this to Mr. Dixon on Tuesday- even if we do not have class due to the break!</u>
<u>Wednesday</u> <u>Not HS1</u>	<u>Help your folks with Thanksgiving meal!...</u>	No Class- Half a Day!
<u>Thursday</u> <u>HS1 Double</u>	<u>Give Thanks with a Grateful heart.</u>	No Class- Be Thankful!!!
<u>Friday</u>	<u>No Class on Fridays</u>	<u>NA</u>
<u>Next Monday</u>	First Day of 2 nd Term!	<u>#40 First Work of the new term!</u>

Tests/Due Dates: **There will be NO quiz this week.**

Mastery Topics: Word Wall: Kinematics equations: $d_f = 5t^2 + V_i t + d_i$ (for acceleration of gravity), $v_f^2 = 2ad$ (for starting from rest); Dynamics (study of motion with forces, Kinematics (study of motion without forces), 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, 4 forces.

Special Events/News:

The competition is THIS TEUSDAY, Nov. 22, 2011! TOWERS WILL BE IMPOUNDED (Collected and stored) on MONDAY by 4:15PM

Extraordinaries/Mastery Review Topics:

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



NAME: _____ GRADE: _____

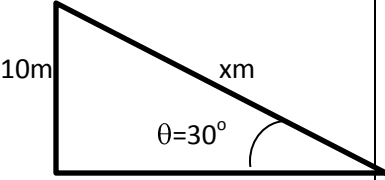
#39 CFAPCA PHYSICS I MASTERY

CHECK OFF SHEET 3

TAKE HOME AND RETURN ON TUESDAY

* DENOTES MEMORY FLASH CARD TOPIC

	Topic	Example	Mastery or Cert.	Initial
1. *	Shapes	Name a 14 sided-3 dimensional figure:		
2. *	Numbers	What is the name of the number 3 followed by 19 zeros		
3. *	Roman Numerals	What is MCDXLXVI in standard Arabic (what we normally use) numbers? _____ Write the number 3987 in Roman numerals _____		
4.	Scientific Notation	a. $9.87 \times 10^{-6} =$ _____ b. $9,870,000,000 =$		
5.	Sigma	$\sum_{i=3}^{i=7} (4i + 5) =$		
6.	15 Percent	What is 15% of 2464? _____ Estimate 15% of 279:		
7.	Slopes (DVAJ)	$D = 5t^4 - 3t^3 + 4t^2 - 71$ $V(t) =$ _____ $V(1) =$ _____ $D =$ _____ $V = 108t^8$		

8.	Resistor Code give colors for numbers 0=____,1=____,2=____ 3=____,4=____,5=____ 6=____,7=____,8=____ 9=____	Gold Green Orange Brown= _____		
9. *	Speed of Sound And Light	Speed of sound on the Moon =_____ The speed of Light on the Moon is C=_____		
10.	Trig, Label Function 	Give Word needed to do a Trig problem like the one to the left: _____ Set up the problem: Bonus- solve the problem for x:		
11.	F_{net}	a. What is the net force on a 15 kg object with one force pulling west on it with 150N, another force pushing it west with 50N, and another force pulling it west with 50N? _____ b. What is the acceleration of the object? _____		
12.	Atwood Machines	a. Find the acceleration of an Atwood machine with masses of 13 and 5kg on each end. _____ b. Find the Tension for a. _____ c. Find the second mass of an Atwood machine if one 7kg mass is accelerating at 3 m/s ² : _____		

13.	Kinematics: $a=0$	Flo swings in her tree at 3m/s, and Eddie at 2m/s. How far apart are they if they start in the same place, travel for 40 seconds and a. go in opposite directions _____		
14.	Kinematics: $a \neq 0$	a. How fast is a 4 kg object moving if it accelerates from rest with an accel. of 10m/s^2 for 5s? _____		
15.	Kinematics: Free fall	a. How far has an object fallen, if it is in free fall for 20 seconds? _____		
16. *	Unit Practice Give unit for:	a. Friction Force=[____] b. Distance=[____] c. Net Force=[____] d. Jerk=[____] e. Speed=[____] f. Acceleration=[____] g. Displacement=[____] h. Mass=[____] i. Weight=[____]		

17.	Perimeter, Area, Volume Density	<p>a. The Perimeter of a circle is called the _____ of a circle.</p> <p>b. The area of a rectangle with sides of 3m and 4m is _____</p> <p>c. The Volume of a box with sides of 3m, 4m and 5 m is _____</p>		
18.	Binary Numbers	<p>a. $11011001_{\text{base } 2} =$ _____ base 10</p> <p>b. $31_{\text{base } 10} =$ _____ base 2</p>		
19.	Friction	<p>a. Static Friction is friction of things that are not _____.</p> <p>b. Kinetic Friction is Friction of _____ things.</p>		
20.	Imaginary Numbers $i^1 =$ _____ $i^2 =$ _____ $i^3 =$ _____ $i^4 =$ _____	a. $i^{257} =$ _____		
21.	Fermi (Estimation to order of magnitude) SHOW work for credit.	a. How many pages of books are at the Parkside School complex?		
22.	Algebra work	$3a+4b-5c=6d$ <p>a. Solve for d</p> <p>b. Solve for c</p>		

Name/ Grade: _____ / Date: _____

HMWRK #40

WRITE IT DO IT PRACTICE...

1. Define the terms/ Describe the Person's contribution to STEM :

Dr. Mark Dean

b. Dr. James E. West

c. Marie Van Brittan Brown

d. Nicolai Tesla

2. Describe to a 3rd grader how to estimate tip (15%) for a bill that is \$179
