



Weekly Sheet for MS1 STEM/PHYSICS
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Week #4, Week of Mon(9/19) to Mon (9/26)



Topics/Content/Skills: Vectors/ How things Move/Measuring velocity

Skills:

- Identify and calculate the components of a vector.
- Identify a velocity and Acceleration graph from a Displacement vs Time graph.
- Solve 1 and 2 step algebra problems for trig.
- Can convert to and from Scientific notation.
- Can convert between 1 level of units. (ex. from cm to Meters)

Vocabulary/Key Terms/Formulas:

Alpha, Omega, Sigma, Inverse Function (opposite), Kuiper Belt, Scientific notation

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

	<u>In Class</u>	<u>Homework Due in this Class</u>
<u>Monday</u> 9/19	Phet Labs- Estimation, Moving Man Khan Academy Practice (if time)	Algebra Worksheets
<u>Tuesday</u>	<u>Component of vectors</u>	Get Quizzes Signed!!! Finish Estimation Lab, More Equation & Algebra practice
<u>Wednesday</u>	<u>Review for Quiz #2</u> If time <u>Vector lab</u>	Finish Moving man lab, HM Mastery Sheet #7
<u>Thursday</u>	<u>Quiz</u>	HM Mastery Sheet #8
<u>Friday</u>	<u>No Class on Fridays</u>	<u>NA</u>
<u>Monday</u> 9/19	<u>More Lab Practice</u> Khan if time	HM Mastery Sheet #9

Tests/Due Dates: There will be a 30 min Quiz on Thursday Sept. 22 (possibly a group test and individual test, depending upon what we get done). There will be a 45 min TEST on Thurs. Sept 29, 2011.

Quiz- Test Topics: 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.

Special Events/News:

6th -10th graders are expected to take the PSAT's and consequently we are having some extra help sessions during academic club time as well as Saturdays 10:00 a.m. to 12:30 p.m. Lunch will be provided.

Extraordinaries/Mastery Review Topics:

Summations, 15%, DVAJ, Trigonometry

Other Information

Here you will list other information that you want to communicate to students and families. You may delete this section if you so choose. What I use this for is below for example:

Resources: Web Site for researching Vectors & DVA Graphs <http://phet.colorado.edu>

Name/ Grade: _____ / Date: _____

Homework Sheet #6.5 (Equation and Algebra Practice)

1.) $\frac{1}{5} + \frac{1}{9} =$

2.) $\frac{x}{5} = 3$

3.) $\frac{x}{7} = 5$

4.) $\frac{18}{x} = -6$

5.) $-10 = x - 1$

6.) $-1 - 6x = -25$

7.) $3x - \frac{8}{9} = \frac{181}{9}$

8.) $9 + 6x = 21$

$$10.) 8 + 5x = -22$$

$$9.) -2x + 5 = -15$$

$$11.) -x + 7 - 5x = -35$$

$$12.) 51 = -x + 7x + 3$$

$$14.) -4 - 8 =$$

$$13.) \frac{2}{5} + \frac{148}{5} =$$

$$15) d_f = 0.5 (10) t^2$$

What does $d_f = ?$ _____ if $t = 5$

What does $d_f = ?$ _____ if $t = 10$

Bonus- What does $t = ?$ _____ if $d_f = 20$?

Memorize for Quiz Next class:

1. All Squares 0-16, 20, 25, 30. All multiplication table 0-12+

Name/ Grade: _____ / Date: _____

Homework Sheet #7

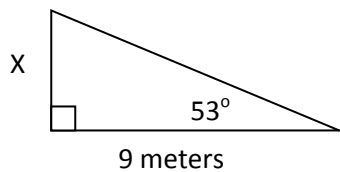
Do these as fast as you can...(if not under 90 seconds- for most) then Mastery isn't quite there....Check time before you start..

X	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
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17. Did you finish these in under 2 minutes? _____

Physics Review Questions of the Week

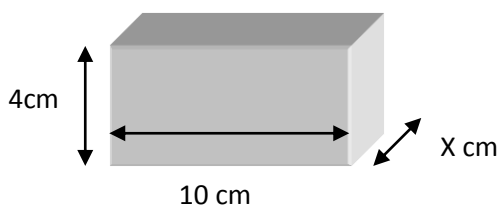
1.



a. Which trig function would you use? Sin Cos Tan
 b. Explain why you pick that one _____

c. **NOT Bonus:** X is the height of the flagpole, how tall is the flag (solve for x)?

2. a.

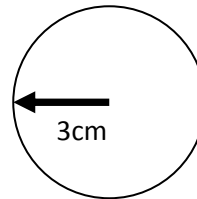


Mass = _____ **gms**
 Volume = 200cc x=_____
 Density = 3gm/cc

Circumference of a Circle = $2 \pi r$

Area of a Circle = πr^2

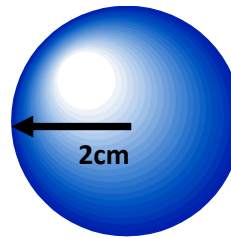
Volume of a Sphere = $\frac{4}{3}\pi r^3$



Radius of this circle is 3 cm.

Circumference = _____

AREA = _____



Radius of this sphere is 2cm

Volume = _____

3. a. 15% of 8642 = _____

b. 15% of 7000 = _____

c. d = _____ v = $3t^5$ a = _____ j = _____

1. Fermi: Estimate how many homework assignments have you ever had? Show work and give answer to the nearest order of magnitude (power of 10).

Name/ Grade: _____ / Date: _____

Homework Sheet #8

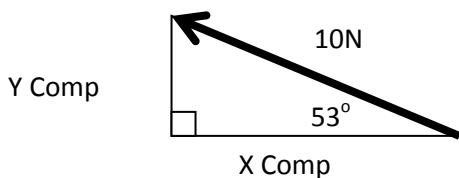
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17. Did you finish these in under 2 minutes? _____

Physics Review Questions of the Week

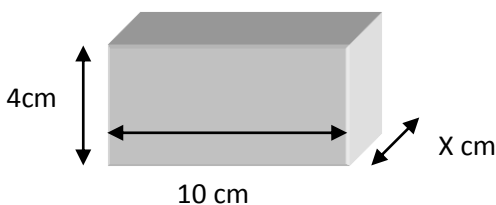
2.



- a. What is the x component of the 10 N vector
? _____
- b. What is the y component of the 10 N vector
? _____

c. **NOT Bonus:** X is the height of the flagpole, how tall is the flag (solve for x)?

2. a.

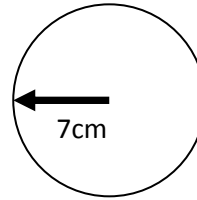


- Mass = _____ **gms**
- Volume = 300cc x= _____
- Density = 5gm/cc _____

Circumference of a Circle = $2 \pi r$

Area of a Circle = πr^2

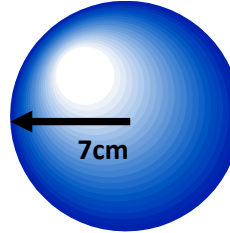
Volume of a Sphere = $\frac{4}{3}\pi r^3$



Radius of this circle is 7 cm.

Circumference = _____

AREA = _____



Radius of this sphere is 7cm

Volume = _____

3. a. 15% of 7042 = _____

b. 15% of 6050 = _____

c. d = _____ v = $16t^7$ a = _____ j = _____

2. Fermi: Estimate how many Quizzes have you ever had? Show work and give answer to the nearest order of magnitude (power of 10).

Name/ Grade: _____ / Date: _____

Homework Sheet #9

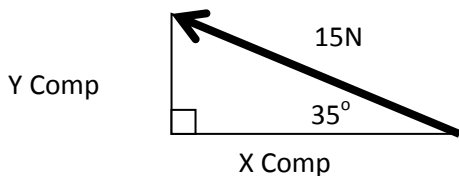
Do these as fast as you can...(if not under 90 seconds- for most) then Mastery isn't quite there....Check time before you start..

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1																
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17. Did you finish these in under 2 minutes? _____

Physics Review Questions of the Week

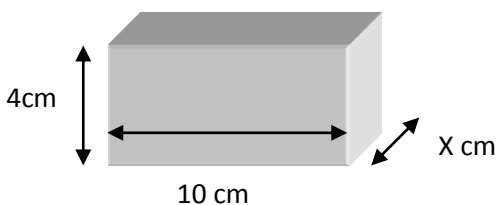
1.



- c. What is the x component of the 10 N vector
? _____
- d. What is the y component of the 10 N vector
? _____

c. **NOT Bonus:** X is the height of the flagpole, how tall is the flag (solve for x)?

2. a.

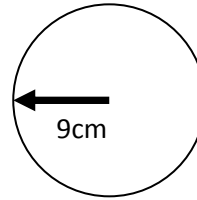


- Mass = _____ **gms**
- Volume = _900cc_ x=_____
- Density = _9gm/cc_ _____

Circumference of a Circle = $2 \pi r$

Area of a Circle = πr^2

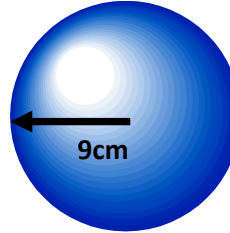
Volume of a Sphere = $\frac{4}{3}\pi r^3$



Radius of this circle is 9 cm.

Circumference = _____

AREA = _____



Radius of this sphere is 9cm

Volume = _____

3. a. 15% of 9642 = _____

b. 15% of 9090 = _____

c. d = _____ v = $9t^8$ a = _____ j = _____

3. Fermi: Estimate how many times have you brushed your teeth? Show work and give answer to the nearest order of magnitude (power of 10).