A-Day: Due Tues., Sept 25 (Assigned: 9/21)
B-Day: Due Wed., Sept 26 (Assigned: 9/24)

Linear Motion 10

TEST REVIEW

On the test you will be able to use your variable and equation sheet. DO NOT write anything on them, except what I gave you.

1) Circle the bigger one:

A. Centimeters or megameters?
B. Micrometers or millimeters?
C. Kilometers or megameters?
D. Centimeters or millimeters?
E. Millimeters or kilometers?
F. Meters or kilometers?

2) When an object is in freefall, what is its acceleration?
3) When an object is in freefall, what is pulling the object?
4) What is the acceleration of a full bottle of water dropped from a desk?
5) What is the acceleration of an empty bottle of water dropped from a desk?

Look at the tape timers on the Acceleration notes.

6) Speed or velocity: A person walks 0.5 m/s to the east.

7) Scalar or vector: A car is moving 30 m/s.

8) An object dropped from a 4 m tall roof. $\Delta y =$ _____.

9) A person throws a ball into the air at 6 m/s. When it comes back, $v =$ _____ and $\Delta y =$ _____ .

10) Convert 4300 micrometers to centimeters. (Hint: convert to meters, then to cm.) 1,000,000 μm = 1 meter.

11) A car is at rest at a stop sign. Then the driver "floors it". It ends up going 100 m in 6.5 seconds. Find the car's acceleration.
Variables: Equation: Solve:

12) "Sitting on the dock of the bay, wasting time" with my sister. I get bored and push her off the 2 m dock. How fast is she moving when she belly flops into the water? (And more importantly how badly is she going to hurt me when she catches me?)
Variables: Equation: Solve:

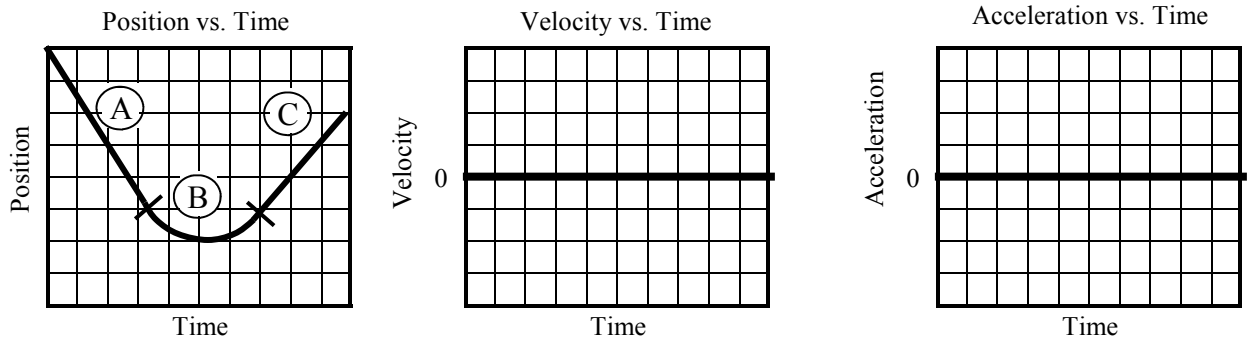
Given: 12 in = 1 ft 3.3 ft = 1 m 5280 ft = 1 mi (mile)

13) Covert 18 m/s to mph.

14) Convert 50 miles per hour (mph) to meters per sec.

15) To transfer from a line from a position to a velocity graph you must find the s_____ of the line.

16) Transfer the following graphs.



17) In y = mx + b, which letters are constants (don't change) for a particular line?
18) In y = mx + b, which letters are variables (change) for a particular line?

19) In the first graph above, y = _____ and x = _____.

20) In the second graph above, y = _____ and x = _____.

21) In the third graph above, y = _____ and x = _____.

22) What does the slope of the above graphs tell us: Graph 1: _____; Graph 2: _____; Graph 3: _____.

23) How fast is the object on the graph going at 4.2 seconds?