

APPC

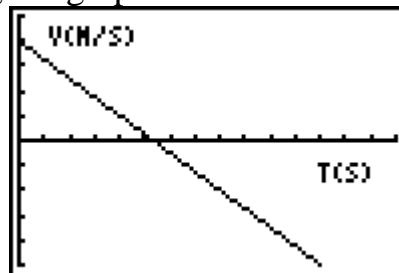
Examination I

Show all your work, and document your answers.

1. A ball is thrown at an angle of 37 degrees with the horizon toward a fence 32 meters away. If the fence is 2.5 meters tall and the ball hits it, what was the initial velocity of the ball?
2. Get the APPC list from Mr. Young and determine from what height the object was being dropped for the 47 times. Give a statistical evaluation of the quality of the experimental data.
3. Calculate your grade in this class based on the following information:
Lab One = ____ Lab Two = ____ Three Letters= ____
Chapter 1 Problems = ____ Fermi Numbers= ____
Quiz Zero = ____ Examination I (you pick the grade) = ____
and your Portfolio if you made these grades

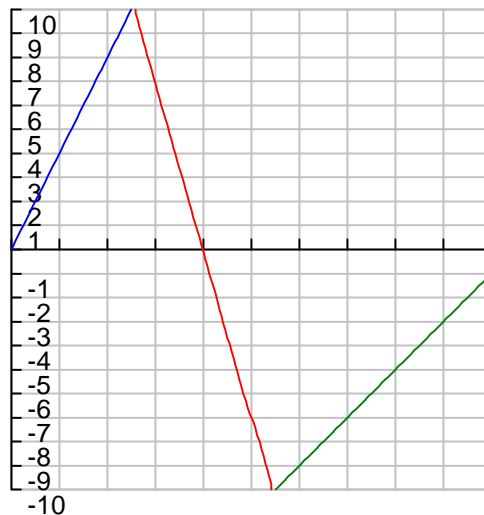
	1 st Q Mid
Overarching Process	3
7 Systemic Parts of APPC	2
Your Ability to Test	4
Working with Technology	2
Growth	1
Web Page/Free Choice	3
Journal	2

4. What is the Fermi number for the number of toothpicks in a light-year? Why?
5. The velocity of a projectile at launch has a horizontal component of v_h and a vertical component of v_v . When the projectile is the highest point of its trajectory give the values for v_h , v_v , and the vertical acceleration.
6. If an object is thrown down give the equation for x (Range) as a function of time, y (Height) as a function of time, and y as a function of x .
7. Explain how to get a graph like this one.



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8. Sketch the graph of distance as a function of time, acceleration as a function of time, and time as a function of distance for the graph in question 7.
9. How is the area under a graph related to a physical quantity? Explain with three examples.
10. Why do we use significant digits and explain how this concept relates to the rounding rule in 2.765 meters becoming 2.76 meters.
11. What would the implications be, if an elephant was reduced to the size of a fly?
12. Why Puppy Pitching?
13. What would the Error or Deviation be if we measured the length of a meter stick to be 0.99, 0.97, 1.00, 1.02, 1.00, 1.03, and 0.99 meters. Why?
14. If a strong wind was blowing at your back as you were riding your bike and it blew your book off of the bike, draw the path of the book after it left the bike rack.
15. Determine the displacement for the motion described by the graph below, where the velocity in meters per second is shown as a function of time in seconds.



16. If a person runs half of a 7 kilometer race at 7 km/h, and the other half at 11 km/h, graphically show the average velocity, and the time it took for the race.