Wednesday, March 13/13
Physics 112/111

Level 1 - Perpendicular Components - Worksheet

1. Test Unit #1

   Test Date - Friday, March 15/13

2. Practice for Unit #1 Test

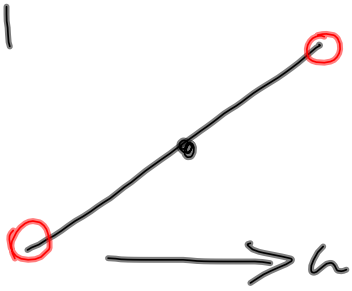
3. Start: Unit #2 - Dynamics

* ave. vel. = $\frac{\text{displ.}}{\text{time}} = \frac{A_1 - A_2}{150s}$ ⇐

* ave speed = $\frac{\text{dist}}{\text{time}} = \frac{A_1 + A_2}{150s}$ ⇐

$A = \frac{1}{2}(a+b)h$ | $A = \frac{1}{2}bh$ | $A = bh$

slope $\begin{cases} m = \frac{y_2 - y_1}{x_2 - x_1} \\ (x_1, y_1) \\ (x_2, y_2) \end{cases}$



slope at $t = 10s$ ⟶ acc.

slope between $t =$ _ and $t =$ _ ⟶ ave acc.

Test - Unit #1 - Outline

1. physics

2. kinematics/dynamics

3. frames of reference: fixed/moving

4. scalar quantity - magnitude only

5. conventional directions

6. vector quantity - magnitude and direction

7. examples of scalar and vector quantities

8. graphical addition of vectors: tip-to-tail/parallelogram methods

9. analytical addition of vectors

10. Level 1 - subtracting vectors
    - perpendicular components

11. vocabulary: distance, position, displacement, time, speed, velocity, acceleration

12. symbols and units of physical quantities

13. types of motion: uniform/uniformly accelerated

14. position-time graphs

15. velocity-time graphs

16. relationship between directions of velocity and acceleration

17. checklist for word problems

18. motion equations <u>including</u> derivations

19. acceleration due to gravity

20. freely falling body problems
