Physics 112

Wednesday, October 17/18

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1. Return:
   FA - Kinematic Equation #2, 3 and 4
   Submit - LC and Justifications

2. Submit FAs #2-4 for Feedback

3. Questions?
   Worksheet - Motion Problems
   Worksheet - Motion Problems - Free Fall
   Worksheet - Extra - Uniformly Accelerated Motion Problems

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4. FA - Freely Falling Body

5. SA - U1 S3 - Mathematical Analysis
   - Tentatively: Tuesday, October 23/18

6. Unit 2 - Dynamics
   Section 1 - Types of Forces and Free Body Diagrams

7. Learning Targets for Unit 2

Formative Assessment – Uniformly Accelerated Motion (K3.9)

A plane travels at 148 km/h for a period of time then accelerates for 15 s over a distance of 832 m. What was the plane's velocity after 15 s?

sketch: plane → east

$\vec{v}_i$ — $\vec{a}$ (m/s^2) — $\vec{v}_f$

t

d

$\vec{v}_i = +148\ km/h$

$\div 3.6$

$41.1\ m/s$

$t = 15\ s$

$\vec{d} = +832\ m$

$\vec{v}_f = ?$

~~$\vec{v}_f = \vec{v}_i + \vec{a}t$~~

$2\vec{d} = \frac{1}{2}(\vec{v}_i + \vec{v}_f)t$ |2

$\frac{2\vec{d}}{t} = \frac{(\vec{v}_i + \vec{v}_f)t}{t}$

$\frac{2\vec{d}}{t} = \vec{v}_i + \vec{v}_f$

$\frac{2\vec{d}}{t} - \vec{v}_i = \vec{v}_f$

$\vec{v}_f = \frac{2\vec{d}}{t} - \vec{v}_i$

$\vec{v}_f = \frac{2(832)}{15} - 41.1$

$\vec{v}_f = +69.8\ m/s$

The final velocity was 69.8 m/s, east.

$= 69.8\ m/s,\ E$

Physics 122

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1. Return Marks
   SA - U1 S1&2
   *Drake and Ajay

2. Worksheet - Relative Velocity (Textbook Problems)
   Worksheets - More Relative Velocity Problems

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3. FAs - Relative Velocity (3)

3. Unit 1 - Section 4: Collisions and Explosions

4. Momentum Revisited

5. Conservation of Momentum

6. Overview - Collisions/Explosions

7. 1D Collisions/Explosions

Science 10

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1. Questions?
   Worksheets - Balancing Chemical Equations
2. Types of Chemical Reactions (5)
3. Formation Reactions
4. Decomposition Reactions
5. Worksheet - Formation and Decomposition Reactions

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6. Single Replacement Reactions
7. Double Replacement Reactions
8. Worksheet - Single and Double Replacement Reactions
9. Combustion Reactions
10. Worksheet - Combustion Reactions