Wednesday, November 12/14
Physics 122/121

Midterm - Friday, Nov. 14/14

1. Experiment 9.1 - Conservation of Momentum
   - Due: Thursday, Nov. 6/14
   - 3 Days Late Today

2. Formative Assessment

3. Check - > Text: Page 536, PP #1-8

4. Formative Assessment - Projectile Fired Horizontally

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5. Experiment 7.2 - Range of a Projectile

6. Projectile Fired at an Angle

Midterm FA. -> Push/Pull or Incline
L1|L2 F.A. -> Rel. Vel. (Boat/Plane)
-> Static Torque
F.A. -> 2D Collision
-> 1D Collision
FA. -> Horiz. Projectile.

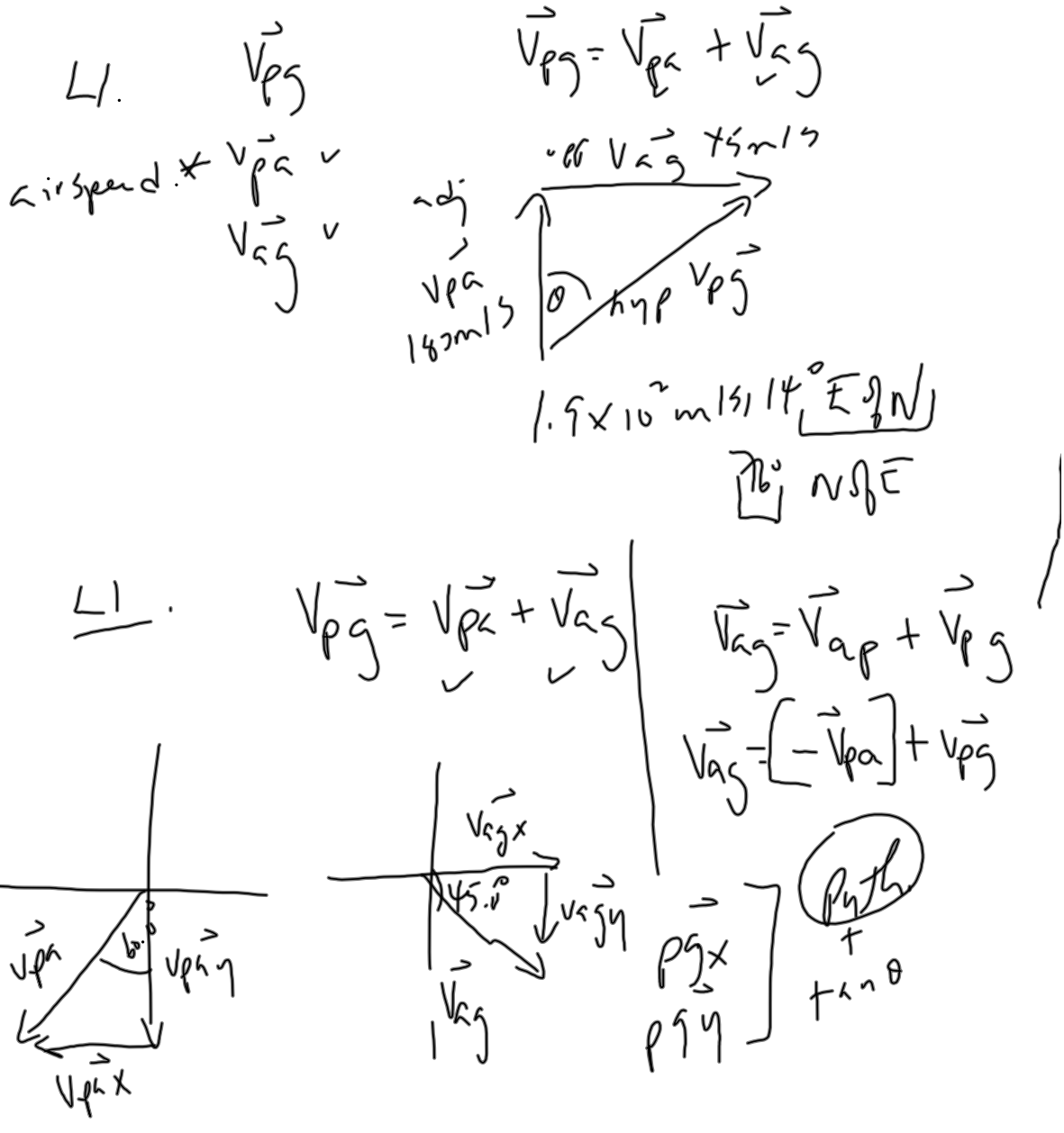
FA - Relative Velocity - Nov. 12/14

L2

A plane takes off traveling north at an airspeed of 180 m/s. A stiff wind blows from the west at a speed of 45 m/s. What is the velocity of the plane with respect to the ground? (185.5 m/s @ 14.0)

L1

A plane has an airspeed of 250 km/h and is flying in a direction 60.0° W of S. A southeasterly wind is blowing at 80.0 km/h. What is the speed of the airplane relative to the ground?

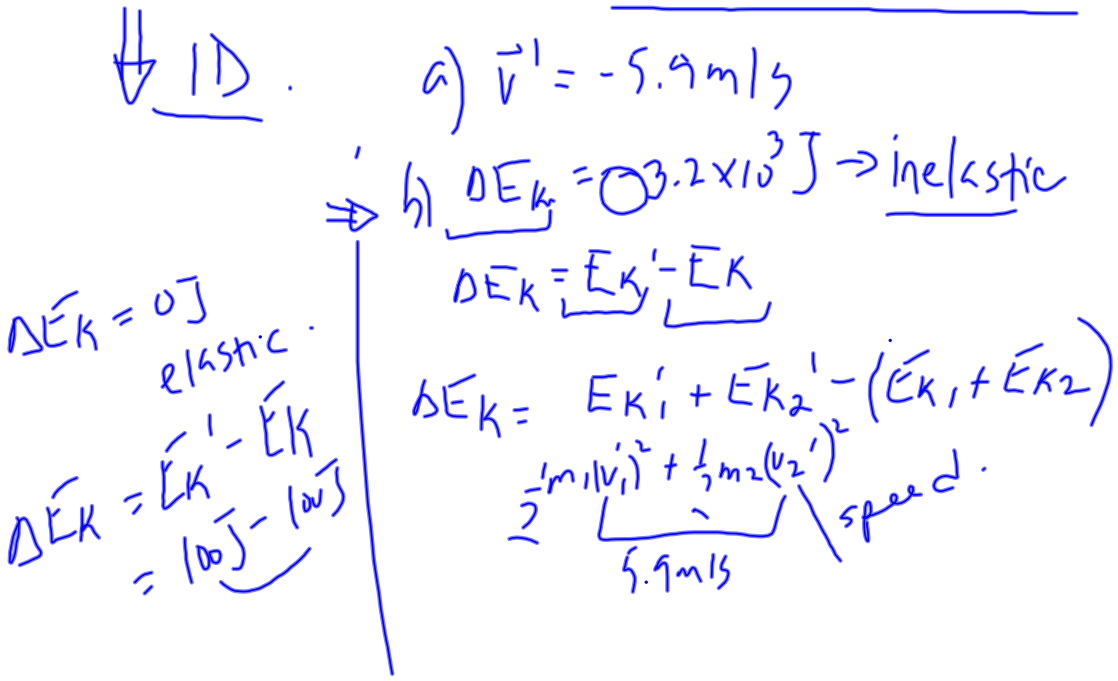


FA - 1D Collision - Nov. 12/14

Jayme, who has a mass of 40 kg, is ice-skating and traveling at 4.0 m/s to the north towards Anthony, who has a mass of 65 kg and is traveling south at 12 m/s towards Jayme. As the two approach each other, Jayme suddenly grabs the arm of Anthony. While holding his arm, the two continue skating together.

a) What is the final velocity of Jayme and Anthony skating together?

b) What type of collision occurred? Give mathematical support.



FA - Horizontal Projectile - Nov. 10/14

A projectile is fired with a horizontal velocity of 330 m/s from the top of a cliff 80 m high. With what velocity will it strike the ground?