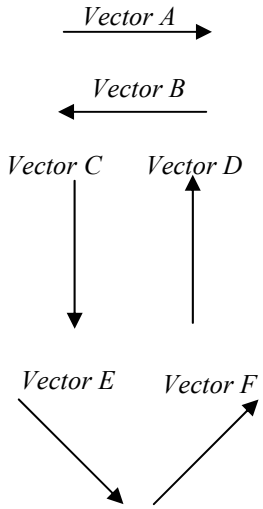
PreAP: due Wed, Sept 28 (Assigned: Mon, Sept 26)
Reg: due Thurs., Sept 29 (Assigned: Tues., Sept 27)

Projectile Motion 3—
(Test Friday and Monday)



1. Using the vectors at the side do this graphical vector addition: D + F –2A.

2. A plane is traveling at 42^o W of S at 85 m/s. A stiff wind blows due east at 25 m/s. Find the final speed and direction of the plane.

3. The vector you drew above is called the _____.

4. We _____ non-horizontal or vertical vectors into their _____.

5. I climb a ladder 2.3 m straight up into a tree. Find the horizontal component of this motion.

6. A baseball is thrown from the ground at 35^o and 7 m/s. Find how far away it lands (called its _____).

7. For the above baseball—find how high it went into the air.

8. A projectile is launched at an angle of 35^o at 60 m/s. The cannon is on a 15 m ledge. Find how far away the projectile lands.

9. A fish is trying to escape from a pursuing sea lion (and example of _____). The fish is swimming 0.4 m/s when it begins to flee. It accelerates at 0.4 m/s^2 at an angle of 60^o to the surface of the water.
   A) After 3 seconds, to what depth did the sea lion have to dive?

   B) A boat is following a radio collar on the sea lion. How far will it have to travel to stay with the chase?

10. You are sick and are given an antibiotic by the doctor. You don't get better. Why? (From the bellwork; be thorough; it is a 2-part answer.)