Projectile Motion Problems—PreAP Physics

1. Pooky the feral cat is launched at 35° and at a velocity of 20 m/s from the top of a 12 m tall house. How far away does Pooky land?

2. A WWII bomber is flying 125 m/s at an altitude of 75 m, trying to keep below the Nazi radar. If the plane is flying horizontally, how far away from where it was dropped will its bombs land?

3. A ball is shot horizontally from the top of a 123 cm tall table. If it lands 1.47 m away, how fast was it shot?

4. A ball is shot 65 m/s from a cannon set at an angle of 42°. The ball needs to hit a target on a wall. The target is 12 m up the wall. How far away should the wall be set?

5. Bolto the human cannonball is shot at an angle of 66° and a velocity of 35 m/s. He wants to shoot thru a hoop at the top of his path. Where should that hoop be? (Both x and y positions, please.)

6. A ball is shot from the ground going 75 m/s at 23°, what is its TOTAL velocity and direction 3.5 seconds into its flight?