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PLEASE GIVE YOUR LAST NAME SO THAT I KNOW WHO YOU ARE.

PHYS 1110 Group Work Sheet 4
Trajectories

Wile E. fires an anvil from an ACME catapult at a sped of 10.0 m/s at an angle of 30° above horizontal.

1. Draw a diagram of the situation, illustrating the relevant parts of the situation.

2. Write down the equations of motion that apply to the situation. Identify and label the quantities that you know.

3. What is the horizontal component of the anvil's initial velocity?

4. What is the vertical component of the anvil's initial velocity?

5. How high above the launch height is the top of the anvil's arc?

6. How much time does it take for the anvil to return to its launch height, going downward?

7. What are the horizontal and vertical components of the anvil's velocity when it returns to its launch height?

8. How far away from the catapult is the anvil when it returns to its launch height?