

## HW 1.5 Horizontal Projectiles

Name .....

### Reading

*College Physics '3.4 Motion in Two Dimensions' (pgs 60 - 64). Concentrate on vectors and the horizontally launched projectiles.*

### Conceptual Question

A projectile is launched horizontally from a projectile launcher mounted on the roof of a building.

- a) What is the direction of the acceleration at the point of launch (1)
  
  
  
  
  
  
  
  
  
  
- b) What is the direction of the acceleration half way through its flight? (1)

### Multiple Choice 1 (2)

A 2.0 kg ball is thrown horizontally at 4.0 m/s from a height of 3.0 m. Another ball of mass 1.0 kg is also thrown from the same height at 8.0 m/s. Compared to the first ball, the time taken for the second ball to hit the ground is:

- A) Half as long
- B) Twice as long
- C) The same time
- D) Four times as long

### Multiple Choice 2 (2)

A 2.0 kg ball is thrown horizontally at 4.0 m/s from a height of 3.0 m. Another ball of mass 1.0 kg is also thrown from the same height at 8.0 m/s. Compared to the first ball, the range for the second ball is:

- A) Half as far
- B) Twice as far
- C) The same distance
- D) Four times as far

