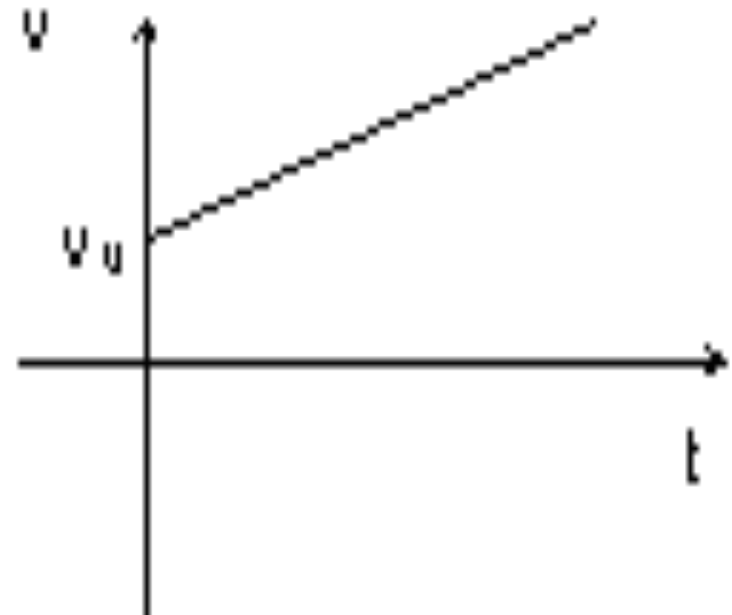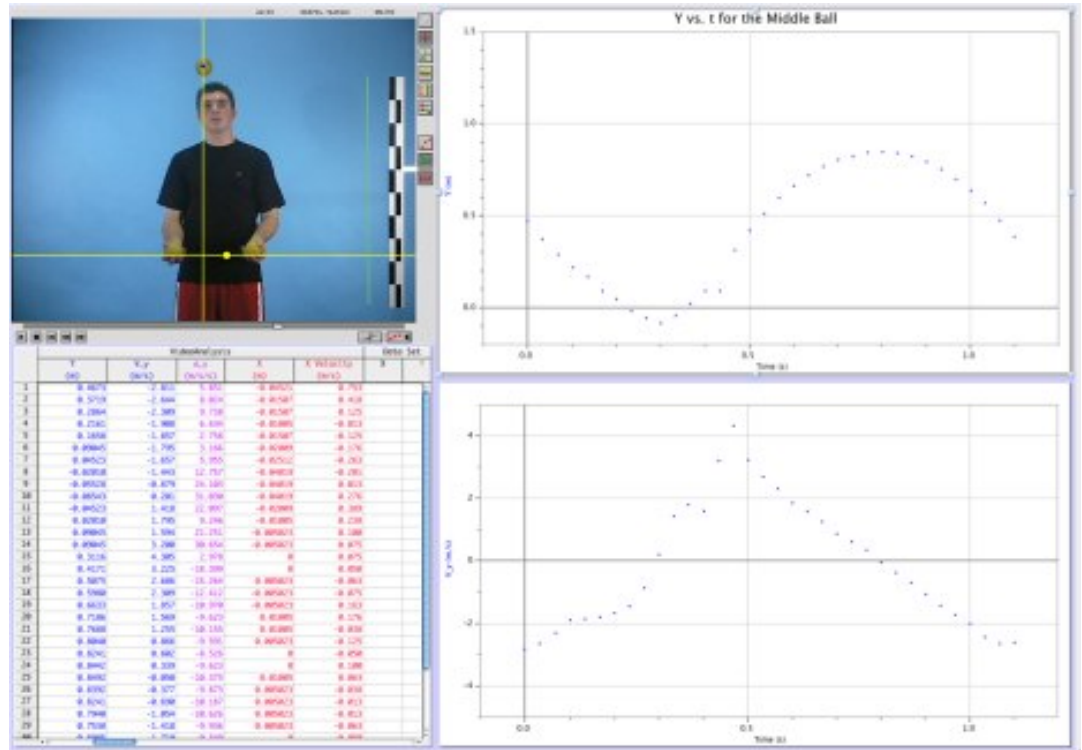# Example

- If the velocity graph of a ball on a track looks like the graph shown at the right, what do the position and acceleration graphs look like?

Figuring out acceleration

- Looked at the y-t, and v_y-t plots for a ball going up and down.

- Acceleration is the derivative of the velocity. How is the velocity changing? Why?
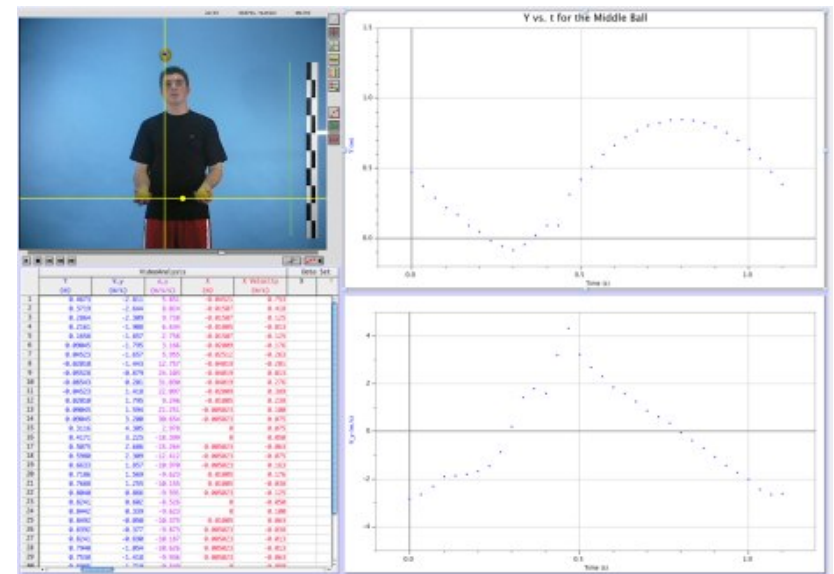
$$\vec{a} = \frac{d\vec{v}}{dt}$$

When the ball is at the highest point what is the velocity?

1. Positive (upward)

2. Negative (downward)

3. Zero

4. Cannot be determined

When the ball is at the highest point what is the acceleration?

1. Positive (upward)

2. Negative (downward)

3. Zero

4. Cannot be determined