

Section 2.3

8. You drop a ball from the edge of a cliff. It lands 4 seconds later.
- Make a table showing the ball's speed each second for 4 seconds.
 - What is the ball's average speed during the first second it is in free fall?
 - What is the ball's average speed for the whole 4 second?
 - What distance does the ball fall during the 4 seconds?
9. During a science experiment, your teacher drops a tennis ball out of a window. The ball hits the ground 3 seconds later.
- What was the ball's speed when it hit the ground? Ignore air resistance.
 - What was the ball's average speed during the 3 seconds?
 - How high is the window?

$$V_{avg} = \frac{D}{t}$$

$$V_{avg}t = D$$

$$V_{avg} = \frac{(V_f + V_i)}{2}$$

$$V = at$$

$$D_y = \frac{1}{2}at^2$$

$$F = ma$$

$$a = \frac{(V_f - V_i)}{t_{total}}$$

$$a \text{ in free fall} = 9.81\text{m/s}^2$$