Name: _____

Date: _____

Section C D F

The Masters School DOBBS
Mr. Alex Rawson
Physics

Acceleration II

1. A worker drops a wrench from the top of a tower 59.0 m tall. With what velocity does the wrench strike the ground? (Assume the positive direction is upward.)

2. A physics student throws a softball straight up into the air. The ball was in the air for a total of 2.96 s before it was caught at its original position.

    a. What was the initial velocity of the ball?

    b. How high did it rise?

3. A small sandbag is dropped from rest from a hovering hot-air balloon. (Assume the positive direction is upward.)

    a. After 8.5 s, what is the velocity of the sandbag?

    b. After 8.5 s, how far below the hot-air balloon is the sand bag?

4. A ball is thrown vertically upward (assumed to be the positive direction) with a speed of 18.0 m/s from a height of 8.0 m.
    a. How high does the ball rise from its original position?

    b. How long does it take to reach its highest point?

    c. How long does the ball take to hit the ground after it reaches its highest point?

    d. What is the ball's velocity when it returns to the level from which it started?