**Physics**

**FA 2.4 – Free Fall Kinematics**

Name

Circle your answers, and label them with units. Ignore air friction and use the convention that **down is negative**. g = 9.8 m/s/s

When you have finished this, go to the website and check your answers. If you got a problem wrong, cross it off on the front, and do it correctly on the back.

**1-2: An air rocket is launched vertically upward at a velocity of 28.0 m/s.**

1. What total time will it be in the air?

2. What is the greatest height it reaches?

**3-4: A rock falls from rest off a cliff that is 24.0 m tall**

3. What time does it take to reach the ground?

4. What is its velocity of impact? (careful of the sign)

**5. An air rocket leaves the ground at 34.0 m/s going straight up and strikes the ceiling of the gym going 26.0 m/s.** How tall is the ceiling in the gym?