

# Gravity Homework #1

Answer each question.

Show all work, formulas, and labels.

Round to nearest Hundredth. (.01)

Name \_\_\_\_\_

Period \_\_\_\_\_ Date \_\_\_\_\_

## Distance

$$s = .5gt^2$$

Label is m

## Velocity

$$V = s/t$$

Label is m/s

## Final Velocity

$$V_f = gt$$

Label is m/s

1. A skydiver jumps from an airplane and is in a free fall.
  - a. How far will he fall in 4 seconds?
  - b. How far will he fall in 6 seconds?
  - c. How far will he fall in 8 seconds?
2. A rock falls from a mountain in 6 seconds before hitting the ground?
  - a. How far does the rock fall?
  - b. What was the average velocity as the rock?
  - c. What was the final velocity of the rock when it hit the ground?
3. A silver dollar is dropped from the top of the Empire State Building and reaches the ground in 8 seconds.
  - a. How tall is the building?
  - b. What was the average velocity of the silver dollar as it fell?
  - c. What was the final velocity of the silver dollar when it hit the ground?