Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Period\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**FreeFallin**

***Show all work. Use the back of this page if needed. Use proper kinematic equations to solve the following problems.***

***Remember: Donkey Kong Eats Stray Cats***

***Scenario: We dropped a ball off the top of Hoover Stadium yesterday. The time for the ball to drop was 1.5 seconds. Answer the following questions.***

1. What was the instantaneous speed of the ball at 1.5 sec.? *v=at*

1. What was the average speed of the ball as it fell? *Vavg =(vi + vf)*

 *2*

1. What was the total distance the ball travelled? *d= 1/2a*$t^{2}$

***Scenario: You are looking for water. In a rock field, you find an old well with a broken rope and pail. You measure the length of the rope to be around 18 meters. You drop a stone down the well and hear a splash 2 seconds later. Do you have enough rope to reach the water? Answer the following questions.***

1. What was the instantaneous speed of the stone at 2 sec?
2. What was the average speed of the stone as it fell?
3. What was the total distance the stone travelled?
4. How could you make the pail reach the water, with only the rope you have?