Name				

## **Free Fall** (p. 72 – 75)

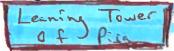
## I. Free Fall

1. Define the term free fall.

Free Fall - motion of a body when air resistance is negligible and the action can be considered due II. Acceleration Due To Gravity alone

1. Who studied the motion of falling objects about 400 years ago?



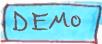


2. All objects in free fall have the same acceleration.

Circle One:

True

False



3. The average rate of free fall on Earth is:



4. Define the term acceleration due to gravity.

Acceleration Due To Gravity - acceleration of an object in free fall that results from the influence of Earth's gravity

5. As an object free falls, the velocity remains constant.

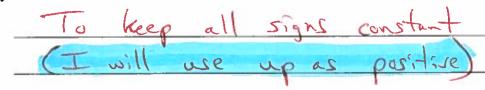


Circle One:

True

False

6. Before performing a free fall calculation, why must a positive or negative coordinate system be identified?



7. Which form of g is used when an object is accelerating? (Don't confuse with direction.)



Downward:  $a = -9.8 \text{ m/s}^2$ 

 $\underline{Upward}: a = 9.8 \text{ m/s}^2$ 



	Name
	8. As an object is thrust into the air, the velocity increases.
	Circle One: True False
	9. An object thrown into the air has zero velocity when it reaches its highest point.
	<u>Circle One</u> : False
) es Harris	10. What is the acceleration of an object at the top its flight?
Jeightlessnes Space!	9.8 m/s2 (Must go somewhere!)
	11. What are three components of many amusement park rides (roller coasters)?
	1. The ride to the top.
	2. Momentary suspension
	3. The plunge downward.
	12. Circle the letter of the type of rider that would fall with greatest acceleration?
	a. A small rider
	b. A large rider c. Mr. Reuter
	d. All objects fall with the same rate of acceleration.
	13. Which equation would be used to determine each of the following for free falling objects?
	Velocity at a given time
	Time given a certain velocity  Time given a certain velocity  Time given a certain velocity
	Time given a certain velocity
	t= 12-v;
	Distance given velocity & time
	de di + vite + 12 ate
	Velocity given distance

Velocity given distance