Name: _____
Chapter 2 Summary Pre-Test

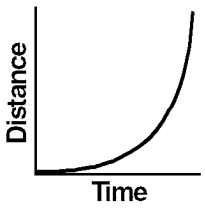
1) A skier starting from rest skis straight down a slope 50. meters long in 5.0 seconds. What is the magnitude of the acceleration of the skier?

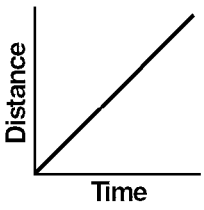
A) 4.0 m/s^2 B) 20. m/s^2 C) 9.8 m/s^2 D) 5.0 m/s^2

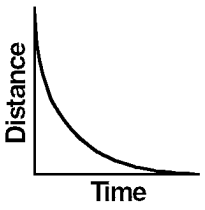
2) A rocket initially at rest on the ground lifts off vertically with a constant acceleration of 2.0×10^1 meters per second^2. How long will it take the rocket to reach an altitude of 9.0×10^3 meters?

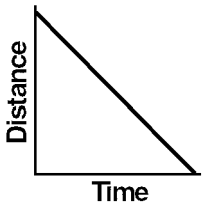
A) 4.5×10^2 s B) 9.0×10^2 s C) 3.0×10^1 s D) 4.3×10^1 s

3) Which graph *best* represents the motion of an object whose speed is increasing?

A) 

B) 

C) 

D) 

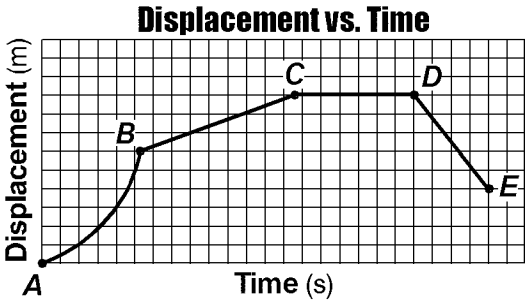
4) A rock falls from rest off a high cliff. How far has the rock fallen when its speed is 39.2 meters per second? [*Neglect friction*.]

A) 19.6 m B) 123 m C) 78.3 m D) 44.1 m

5) Approximately how far will an object near Earth's surface fall in 3.0 seconds?

A) 9.8 m B) 29 m C) 44 m D) 88 m

6) The displacement-time graph below represents the motion of a cart initially moving forward along a straight line.



During which interval is the cart moving forward at constant speed?

A) *CD* B) *DE* C) *BC* D) *AB*

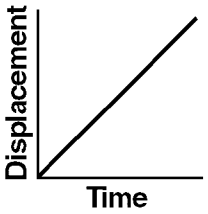
7) An airplane originally at rest on a runway accelerates uniformly at 6.0 meters per second^2 for 12 seconds. During this 12-second interval, the airplane travels a distance of approximately

A) 220 m B) 860 m C) 72 m D) 430 m

8) A basketball player jumped straight up to grab a rebound. If she was in the air for 0.80 second, how high did she jump?

A) 1.2 m B) 3.1 m C) 0.78 m D) 0.50 m

9) The graph below represents the motion of an object.



According to the graph, as time increases, the velocity of the object

A) increases B) remains the same C) decreases

Chapter 2 Pre-Test Part II

Directions: Answer the following questions using the rubric below as a guide.

Writing a correct equation for the problem	1 point
Plug numbers into equation	1 point
Units on *ALL* numbers in work	1 point
Solving for Correct Final Answer with unit	2 point
Total point per problem	**5 points total**

1. A pilot stops a plane in 484 m using a constant acceleration of - 8.0 m/s^2. How fast was the plane moving before braking began? (assume x-direction motion only)

2. Mr. O'Leary throws his Wife's cat, Dory, off the roof of City Hall.

   a. If people hear Dory Meow-screaming for 4 seconds, how fast will she be travelling after this time? (assume y-direction motion only)

   b. How far did Dory fall during this time?

3. Roscoe Parrish has a vertical leap of 1.2 m.

   a. What must Roscoe's takeoff velocity be to reach this height?

   b. What is Roscoe's hang time? (total time in the air?)