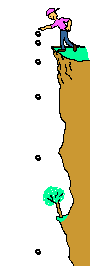
**General Physical Science – Quiz 3 Study guide**

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period\_\_\_\_\_\_\_\_\_\_

|  |  |  |
| --- | --- | --- |
|  | Measures | SI Unit |
| Speed |  |  |
| Velocity |  |  |
| Acceleration |  |  |

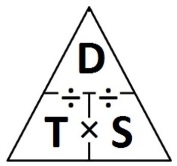
|  |  |
| --- | --- |
| Graph | What is the *acceleration* |
|  |  |
|  |  |
|  |  |

**Fill –in problems – answer the questions or define the terms.**

1. What are the 3 ways an object can have acceleration?
2. What is an example of acceleration through ONLY changing speed?
3. What is an example of acceleration through ONLY changing direction?
4. What is an example of acceleration through both speed and direction?
5. How does a rollercoaster accelerate?



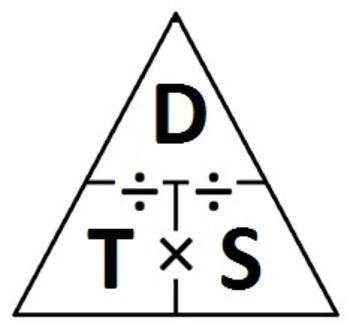
1. What does positive acceleration mean?
2. What does negative acceleration mean?
3. What two things in a car can change your acceleration by changing the ***speed****?*
4. What can change your acceleration by changing the ***direction*** in a car?

 and direction

and *direction*

**Practice problems:**

1. A dog runs 20 meters in 30 seconds. What is its speed?
2. What is your velocity if you walk 300 meters south to school and it takes you 3,600 seconds?
3. How long does it take you to walk 70 meters at a speed of 30 meters per second?
4. How far will you drive if you are in a car that is going a speed of 40 meters per second for 2,000 seconds?
5. A flock of birds is initially flying south for the winter at 10 m/s. By the end of their journey they have slowed to only 1 m/s. The change in speed takes a total of 200 seconds. What is their acceleration?
6. You are running westward at 10 m/s, and you come to a sudden stop after 90 seconds. What is your acceleration?
7. Your dog is laying down at rest. He begins running and reaches a final velocity of 2 m/s. It takes him 14 seconds to reach that speed. What is his acceleration?
8. A cat is initially running 12 meters south and it takes her 6 seconds. She speeds up to 4 m/s when she is chased by a dog. The change in speed takes a total of 10 seconds. What is her acceleration?  
   **Given: Unknown**:

**Step 1: Find the speed of vi**

**Step 2: Find a**

**Write the acceleration by including direction**: