o Physical Science Daily Warm-Ups

Speed, Velocity & Acceleration



1. ***Answer the questions each day during the first 10 minutes of class.***
2. ***You MUST SHOW ALL WORK*** *for calculations and answers must have units!!* ***(No work; No credit)***
3. *If you are absent, you must make-up the missed questions the day you return.*

**Score**

1. *Write the correct answers for any questions you missed.*
2. *Turn in this assignment with your unit pack at the end of each unit.*

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|  | Daily Warm-Ups: |
| Day 1 | What is speed?  What is the formula used to calculate speed/velocity? Give formula and provide a key for each of the variables. Indicate the units used for each variable. |
| Day 2 | If a car travels 500 m in 7 seconds, how fast is it going? (Show your work!)  How much time will it take for an ant to travel 10 m across the forest floor if it is traveling at a pace of 0.5 m/s? |
| Day 3 | Choose the correct words from the following list to describe the motion during each segment of the journey to fill in the blanks.   * accelerating * decelerating * constant speed * at rest   **Segment 0-A** The bus is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Its speed changes from 0 to 10 m/s in 5 seconds.  **Segment A-B** The bus is moving at a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_of 10 m/s for 5 seconds.  **Segment B-C** The bus is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. It is slowing down from 10 m/s to rest in 3 seconds.  **Segment C-D** The bus is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. It has stopped.  **Segment D-E** The bus is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. It is gradually increasing in speed. |
| Day 4 | What is acceleration?  Explain the difference between positive acceleration and negative acceleration. (Give an example of each.)  What is the formula used to calculate acceleration? Give the formula and provide a key for each of the variables. Indicate the units used for each variable. |
| Day 5 | While traveling along a highway a driver slows from 24 m/s to 15 m/s in 12 seconds. What is the automobile’s acceleration? (Remember that a negative value indicates a slowing down or deceleration.)  A cart rolling down an incline for 5.0 seconds has an acceleration of 4.0 m/s2. If the cart has a beginning speed of 2.0 m/s, what is its final speed? |