**Motion and Calculating Speed Notes**

Motion is when an object \_\_\_\_\_\_\_\_\_\_\_\_place or \_\_\_\_\_\_\_\_\_\_\_\_\_. To properly describe motion, you need to use the following:

* Start and end \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_?
* \_\_\_\_\_\_\_\_\_\_\_\_\_ relative to what?
* How \_\_\_\_\_\_\_\_\_ did it go?
* In what \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_did it go?

**What Is Speed?**

* Speed is the \_\_\_\_\_\_\_\_\_\_\_\_ an object travels in a certain amount of \_\_\_\_\_\_.
* To calculate speed, you use the following formula:

Speed (s) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Suppose you ran 2 km in 10 min. What is your speed?

S= D = \_\_\_\_\_\_\_\_\_\_ = km/min.

T

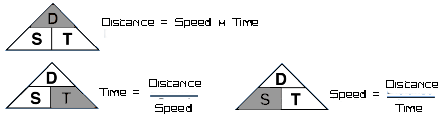
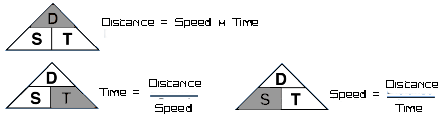
What is the speed of a car traveling 144 km in 2 hours?

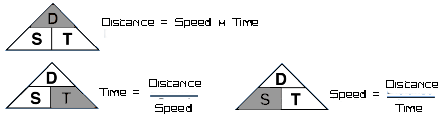
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ km/h

Show work: Speed = Distance

Time

**The Pyramid method**:



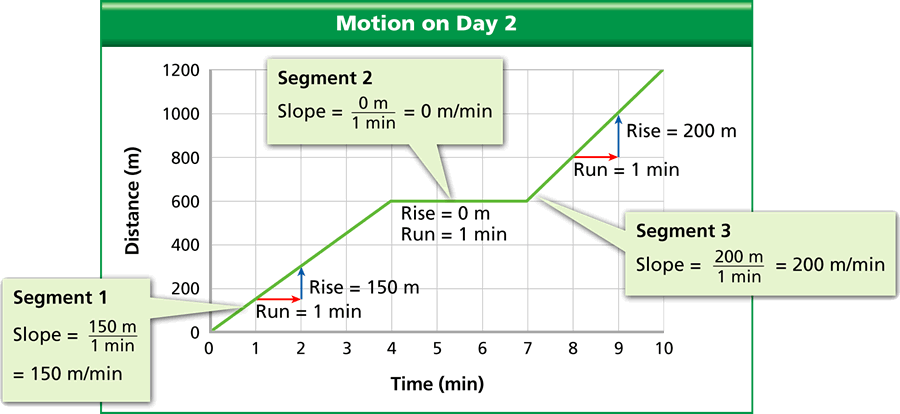


* **To Find Distance**: Formula:
* How far can a snail travel at 30 cm/hr in 6 hours?
* **To Find Time**: Formula:
* How long will it take the snail to cross the road that is 4 meters (400 cm) across traveling at a speed of 30 cm/hr?
* \_\_\_\_\_\_\_\_\_\_\_\_ speed is when you are traveling at the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ of speed, such as 55 mph constantly on a highway.
* Average speed is taking the \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_, and dividing by the \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ it takes. Used for calculations that involve \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ speed.
* Instantaneous speed is the speed at any \_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_ in time.
* Velocity – is the speed of an object in a \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_**. Ex:**

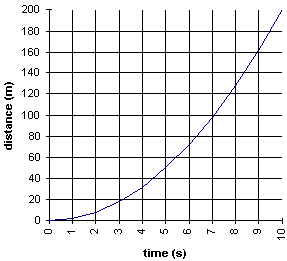
**Motion Graphs**

Slope – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of a line on a graph

Slope = rise



* The slope of a \_\_\_\_\_\_\_\_\_\_\_\_\_ vs \_\_\_\_\_\_\_\_\_\_\_ graph represents \_\_\_\_\_\_\_\_\_ – the rate that distance changes in relation to time



* Plot distance against time to create a line graph of motion
* Distance is on the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ axis (y)
* Time is on the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ axis (x**)**