Plotting and Graphing Lesson

**Speed:**

Definition: the \_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_\_ (how fast motion happens). Speed is the \_\_\_\_\_\_\_\_\_ traveled in a given time.

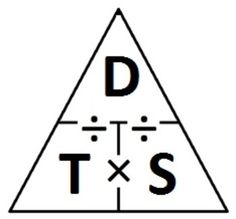
**Calculating Speed:**

Speed = \_\_\_\_\_\_\_\_\_\_\_\_\_\_/\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Units: meters/second (m/s)

Miles/hour (mph)

Kilometers/hour (km/h)

**Speed Triangle:** 

**Distance vs. Time Graphs:**

Shows how speed relates to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Time is on the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ axis (X-axis).

Distance is on the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ axis (Y-axis).

**Interpreting Distance vs. Time Graphs:**

As an object moves, the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ it travels \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ with \_\_\_\_\_\_\_\_.

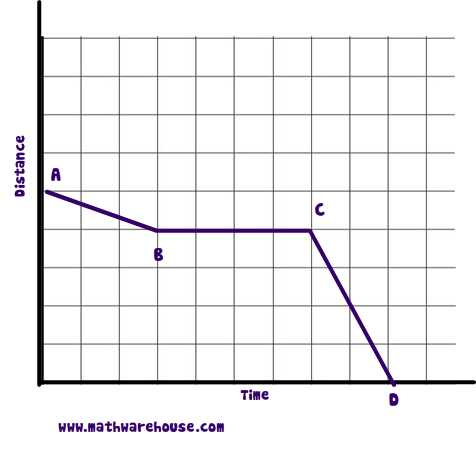
This can be seen as a \_\_\_\_\_\_\_\_\_\_\_\_\_\_, or rising, line on the graph.

A \_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ line shows an interval of time where the speed is \_\_\_\_\_\_\_ meters per second (NO MOTION!!).

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ lines show intervals where the speed is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (faster) than intervals with less steep lines.

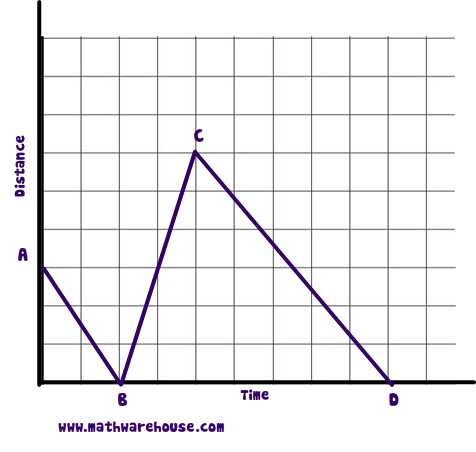
The steepness, or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, of the line is calculated by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the change in \_\_\_\_\_\_\_\_\_\_\_\_\_\_ by the change in \_\_\_\_\_\_\_\_\_\_\_\_\_ for that interval.

**Your turn: You are returning home from your friend’s house:**



1. Between what two points did you stop to pet a friendly dog? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Between what two points did you realize you were late and you began running? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Below is a graph of Ms. Mettler running errands. She began at school, but realized she forgot her wallet, so had to return home.



1. At what point did Ms. Mettler first return home? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Compare Ms. Mettler’s speed at between points B,C and points C,D. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_