

NAME:

PERIOD:

DATE:

TYPES OF MOTION NOTE TAKER

Constant Speed – Motion that stays exactly the same over a period of time.

Ex. The old woman drove 35 miles/hour everywhere, even red lights and stop signs.

The toy car only went one speed when turned on.

The falling rock had reached its terminal velocity, and wouldn't go any faster after that.

Instantaneous Speed – Motion at one specific moment in time.

Ex. At the second the arrow hit the target, it was going 25 meters/second.

As the baseball crossed home plate, it was travelling at 98 miles/hour.

When the policeman hit the button on the radar gun, the car was travelling 75 miles/hour.

Average Speed – The total distance \div the total time. Averages all the speeds over the full distance.

Formula:

$$\text{Average Speed} = \frac{\text{Total Distance}}{\text{Total Time}}$$

Ex. The entire 100 mile mud run took 5 hours, including rest breaks for an average speed of:

$$\frac{\text{Total Distance}}{\text{Total Time}} = \frac{100 \text{ miles}}{5 \text{ hours}} = \text{An average speed of: } \mathbf{20 \text{ miles/hour}}$$

