

Instantaneous

VS

Average

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

$$S = \frac{d}{t} = \frac{239,000}{50} = 4780 \text{ miles/hour (mi/hr)}$$

speed = 0
(stationary)

$$S = \frac{d}{t} = \frac{239,000}{50} = 4780 \text{ miles/hour (mi/hr)}$$

Note: The result 4780 miles/hour (mi/hr) is crossed out with a red X.

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

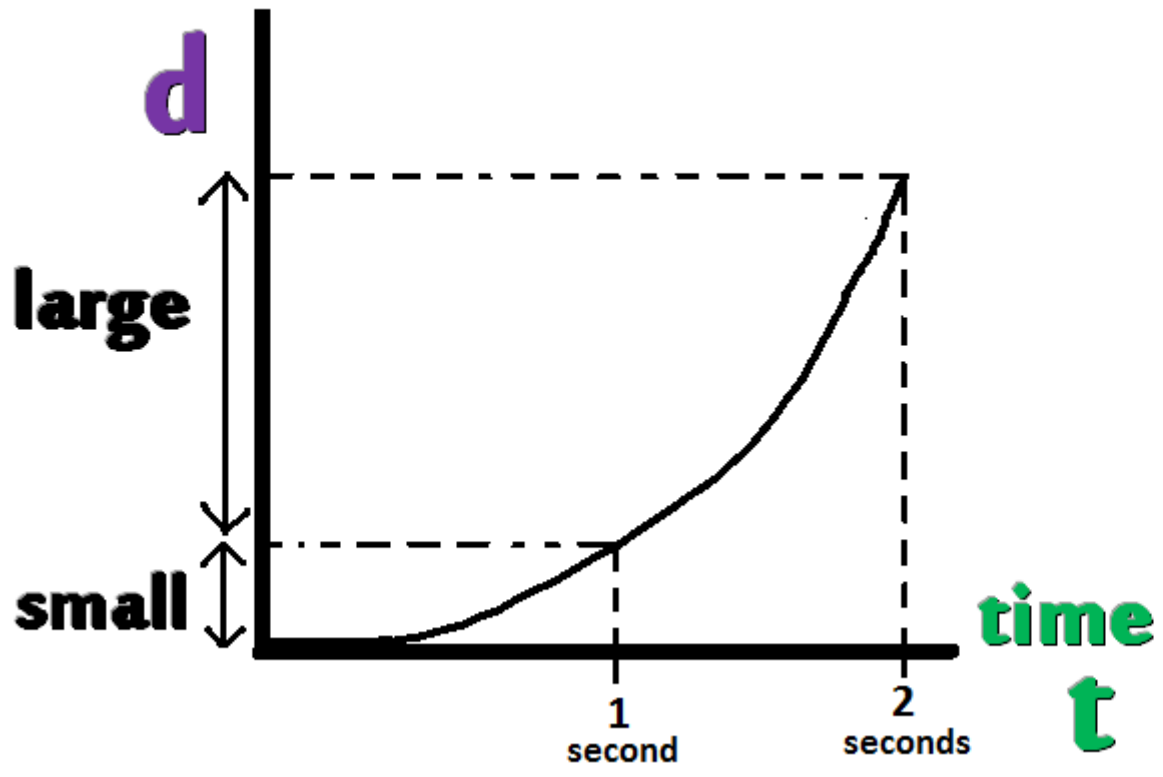
~~Speed~~
averagespeed

$$S = \frac{d}{t} = \frac{239,000}{50} = 4780 \text{ miles/hour (mi/hr)}$$

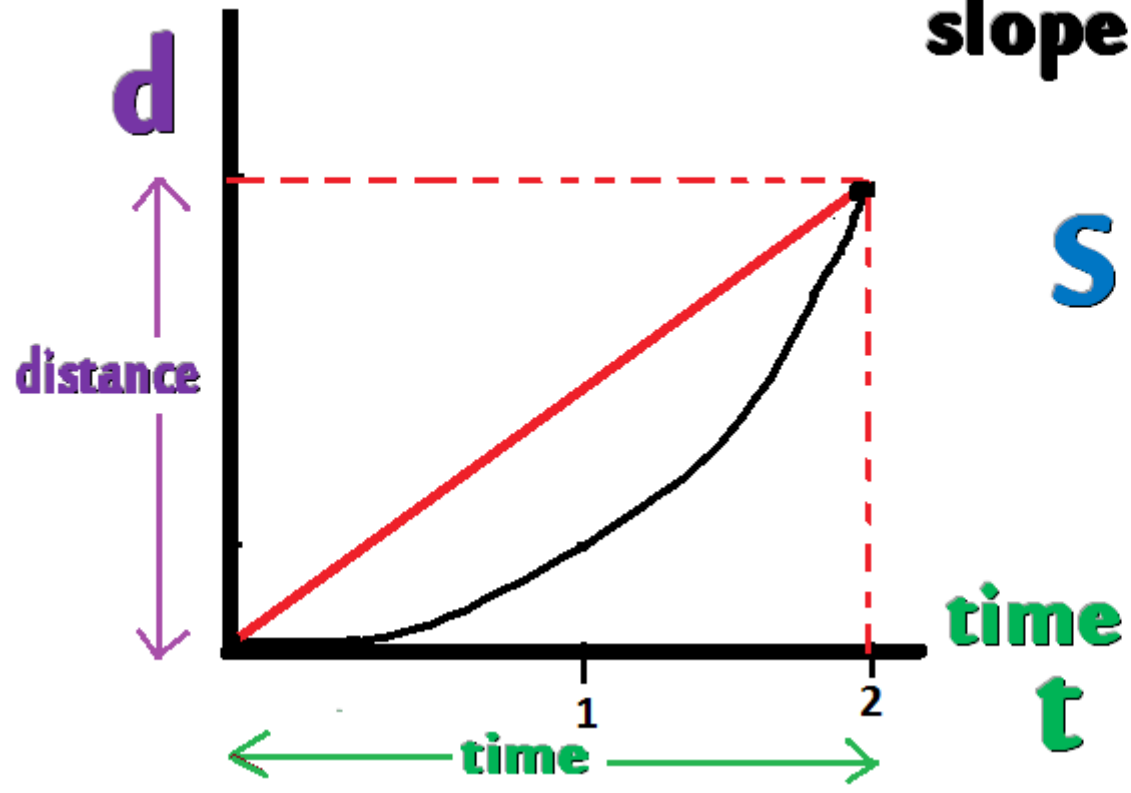

$$\text{Average Speed} = \frac{\text{TOTAL distance}}{\text{TOTAL time}}$$

Instantaneous Speed = Rate at which
your distance
is changing.

distance



distance



slope = $\frac{\text{rise}}{\text{run}}$

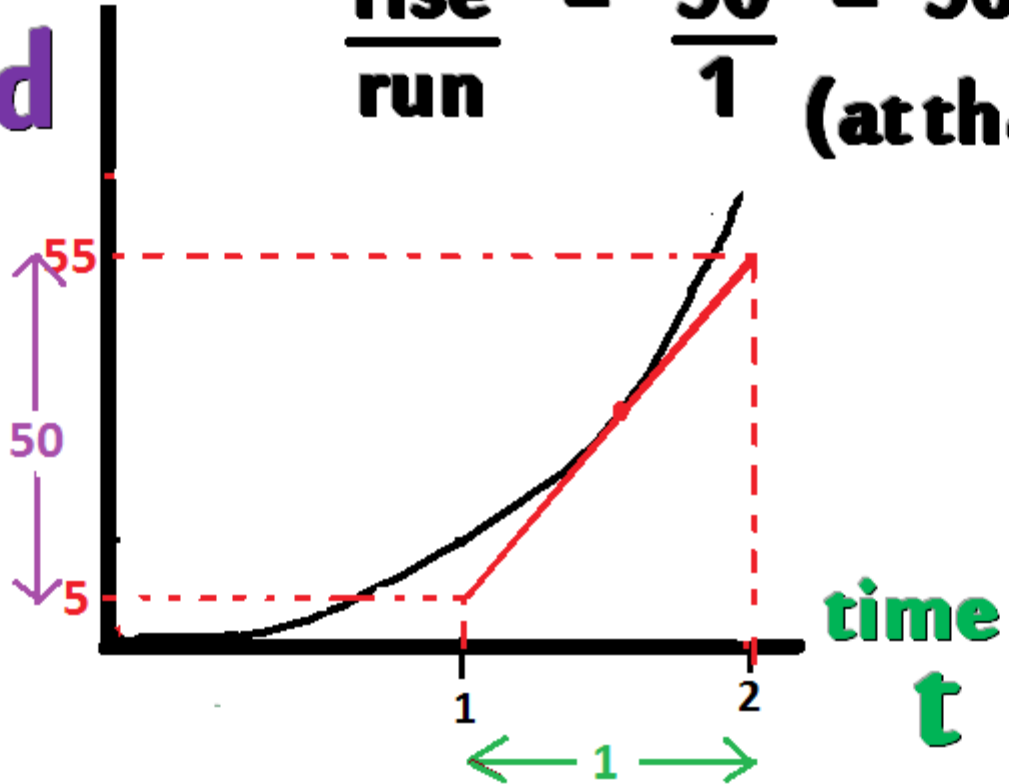
$S = \frac{d}{t}$

time
t

distance

d

$$\frac{\text{rise}}{\text{run}} = \frac{50}{1} = 50 \text{ mi/hr (at that instant)}$$



distance

d

180

90

0

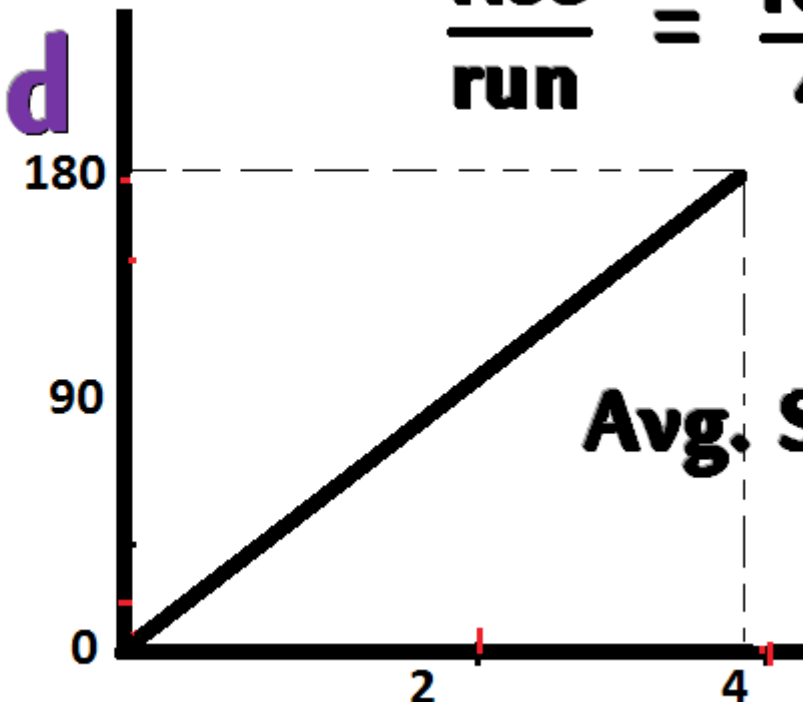
2

4

time
t

$$\frac{\text{rise}}{\text{run}} = \frac{180}{4} = 45 \text{ mi/hr}$$

Avg. Spd = 45 mi/hr



distance

d

180

90

0

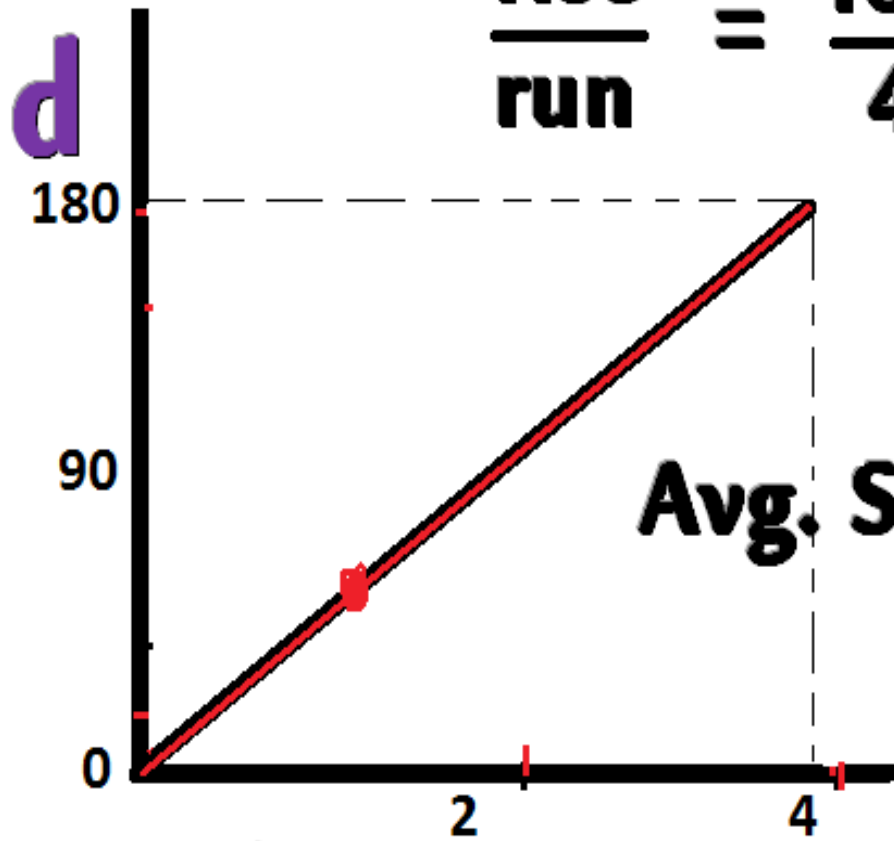
2

4

$$\frac{\text{rise}}{\text{run}} = \frac{180}{4} = 45 \text{ mi/hr}$$

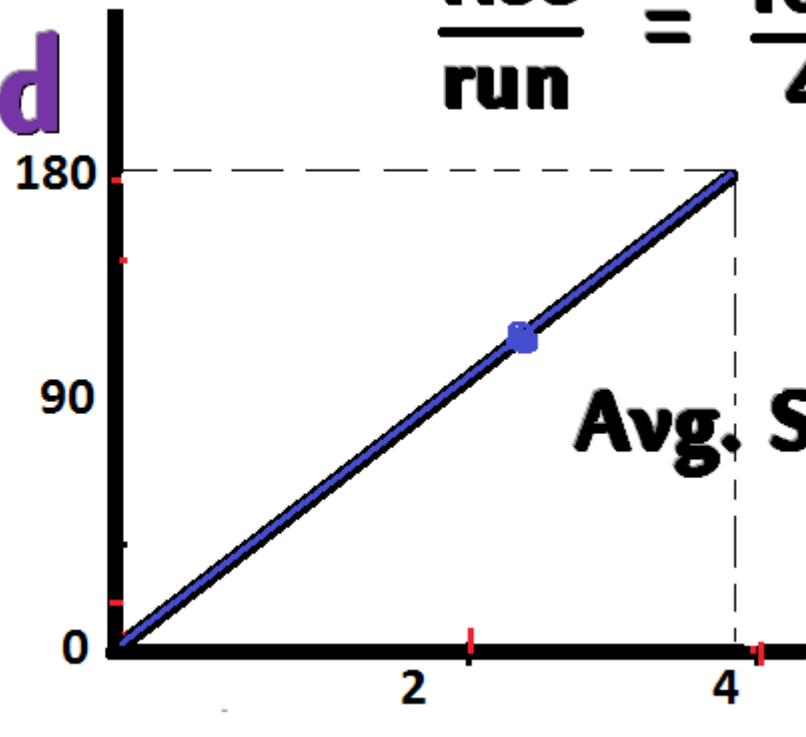
Avg. Spd = 45 mi/hr

time
t



distance

d



$$\frac{\text{rise}}{\text{run}} = \frac{180}{4} = 45 \text{ mi/hr}$$

Avg. Spd = 45 mi/hr

time
t