

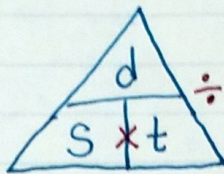
# Speed

Motion: change in position of an object over a period of time

→ need a point of reference to compare to

Speed: rate at which something is changing position over a period of time

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



NO NAKED NUMBERS! Put units on them!

It takes Cooper  $\overset{t}{0.5 \text{ hours}}$  to walk to PetCo. His route is  $\overset{d}{40 \text{ km}}$  long. What is Cooper's average speed on his walk to PetCo?

Given: $0.5 \text{ hr} = t$ $40 \text{ km} = d$  Formula: $\frac{d}{t}$	Work: $\frac{40 \text{ km}}{0.5 \text{ hr}} =$  Answer: $80 \text{ km/hr}$
---	--

In a dog competition, Cooper caught a ball when it was  $\overset{d}{25 \text{ meters}}$  away. While running, he traveled at an average speed of  $\overset{s}{5 \text{ m/s}}$ . How long did it take him to catch the ball?

Given: $25 \text{ m} = d$ $5 \text{ m/s} = s$  Formula: $\frac{d}{s}$	Work: $\frac{25 \text{ m}}{5 \text{ m/s}} =$  Answer: $5 \text{ s}$
---	---

Cooper and Ms. Pilarz walked around the block at a constant speed of  $\overset{s}{4 \text{ m/s}}$ . If they walked for  $\overset{t}{16 \text{ minutes}}$ , how far did they travel? (Careful we need to do some converting first!)  $16 \text{ min} \times 60 \text{ sec}$

Given: $4 \text{ m/s} = s$ $960 \text{ s} = t$  Formula: $s \times t$	Work: $4 \text{ m/s} \times 960 \text{ s} =$  Answer: $3,840 \text{ m}$
---	---