THE FIVE STEPS:
SOLVING WORD PROBLEMS

Solving word problems can be tricky sometimes.

The Five Steps give us a place to start.

Remembering Speed:

	Definition	Variable
Distance Travelled:	-A Change In Position -A Length Units: feet, Meters, cm, inches, ~~feet's~~	d
Speed	-The Rate At Which Your Position Changes Units: $\frac{\text{miles}}{\text{HR}}$ $\frac{\text{meters}}{\text{sec}}$ $\frac{\text{Kilometers}}{\text{Hour}}$	v ~~West~~

SPEED = DISTANCE ÷ TIME

$$v = d \div t$$

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

Remembering Speed:

	Definition	Variable
Distance Travelled:	A change In Position, A Length Units: meters, inches, Feet, Miles, etc...	d
Speed	The Rate At Which Your Position Changes Units: meters/sec miles/HR	v

SPEED = DISTANCE TIME

$$\text{SPEED} = \frac{\text{DISTANCE}}{\text{TIME}}$$

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

THE FIVE STEPS:

1a. Write down what you know (the numbers) and assign to one of your variables (v, d, or t).
1b. Write down the variable you are looking for.
2. Write down the formula that you will use to solve the problem. (v = d/t)
3. Plug in the variables you know from Step 1a.
4. Solve for the variable you are looking for. Be sure to include the proper units.
5. Check your work. Use your answer and one of your givens to see if you get the other given.

EXAMPLE: A turtle is turtling down the street with a

1a $v = 4.1\ m/s \quad t = 2{,}221\ \text{SEC}$

1b $d = ?$

2 $v = \frac{d}{t}$

3 $4.1 = \frac{d}{2221}$

$\frac{m}{SEC} = \frac{\bigcirc}{SEC}$

4 $2221 \times 4.1 = \frac{d}{2221} \times (2221)$

9106.1 METERS = d

5 $\frac{9106.1\ m}{2221\ SEC} = 4.1\ m/s$

EXAMPLE: A turtle is turtling down the street with a

1a) $v = 4.1 \text{ m/s}$, $t = 2{,}221 \text{ sec}$

1b) $d = ?$

2) $v = \frac{d}{t}$

3) $4.1 = \frac{d}{2221}$

4) $2221 \times (4.1) = 2221 \times \left(\frac{d}{2221}\right)$

$2221 \times 4.1 = d$

$\boxed{9{,}106.1 \text{ m}} = d$

5) $v = \frac{9106.1 \text{ m}}{2221 \text{ s}} = 4.1 \text{ m/s}$ ✓ IT WORKS

1a $d = 12$ blocks $t = 17$ sec

1b $v = ?$

2 $v = \frac{d}{t}$

3 $v = \frac{12}{17}$

4 $v = \frac{12}{17} = .706 \frac{\text{BLOCKS}}{\text{SEC}}$

5 $.706 = \frac{d}{17}$

$17 \times .706 = \frac{d}{17} \times 17$

$= 12$