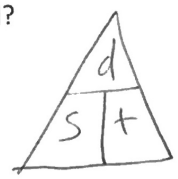
Speed and Velocity Worksheet Name: Key

Answer the questions using the following formulas: (Don't forget units for each answer)

s = d/t **v = d/t**

1.) If Paul throws a football 50 meters in 3 seconds, what is the average speed of the football?



Formula: $s = \frac{d}{t}$

Plug in numbers:

$$s = \frac{50\text{m}}{3\text{s}}$$

Answer: 16.7 m/s

2.) If it takes Cassie 3 seconds to run from the batter's box to first base at an average velocity of 6.5 meters per second, what is the displacement that she covers in that time?

Formula: $d = vt$

Plug in numbers:

$$d = (6.5\text{m/s})(3\text{s})$$

Answer: 19.5 m

3.) Steve ran 5000 meters from a swarm of bees at an average speed of 6 m/s before he dove into a pond. How long did he run?

Formula: $t = \frac{d}{s}$

Plug in numbers:

$$t = \frac{5000\text{m}}{6\text{m/s}}$$

Answer: 833.3 s

4.) Sharon rode her bike for 18 miles to the north in 3 hours. What is her average velocity?

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

Plug in numbers:

$$v = \frac{18\text{miles}}{3\text{hrs}}$$

Answer: 6 mi/hr

5.) The Frisbee was thrown at a speed of 8 m/s and it was in the air for 10 seconds. How far did the Frisbee travel?

Formula: $d = s t$

Plug in numbers: $d = (8\ m/s)(10\ s)$

Answer: **80 m**

6.) The dog ran for a length of 12 meters at a speed of 4 m/s. How many seconds was the dog running?

Formula: $t = \frac{d}{s}$

Plug in numbers: $t = \frac{12\ m}{4\ m/s}$

Answer: **3 s**

7.) I rode my bike to school today. I rode a distance of 8 miles at a speed of 9m/s. How long did it take me (in minutes) to get to Pope? (1 mile = 1609 meters)

Hint: MUST HAVE LIKE UNITS

Formula: $s = \frac{d}{t}$

Plug in numbers: ① convert: $\frac{8\ mile \mid 1609\ m}{1\ mile} = 12872\ m$

② $s = \frac{d}{t}$ $t = \frac{d}{s}$ $t = \frac{12872\ m}{9\ m/s}$ $t = 1430.2\ s$

Answer: ③ convert: $\frac{1430.2\ s \mid 1\ min}{60\ s} =$ **23.8 mins**

8.) The table shows data of sprinting speeds of some animals. Complete the table.

Animal	Distance	Time	Speed
Cheetah	75 m	3 s	25 m/s
Greyhound	160 m	10 s	16 m/s
Gazelle	1 km	0.01 s	100 km/hr
Turtle	30 cm	30 s	1 cm/s

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

$d = s t$