Name _____ Date_____

Distance over Rate Equals Time Worksheet

Use the formula $\frac{d}{r} = t$ to solve the following word problems.

1. Adam raced his mountain bike up an extremely steep and difficult trail on Mt. Stacko. By the end of the race, he had travelled 1 ½ miles and it took him 2 hours to complete. What was Adam's average speed during the race?

2. Clara was typing an article for her blog. Her article contained 1475 words. She knew exactly what she wanted to write, so she flew through it in one sitting. It only took her 21 minutes to type it up. How many words per minute did she type? You can round your answer down to two decimal places.

3. Thomas drove his Remote Controlled car as fast as he could for 50 yards. It only took 8 seconds to go that far. How many yards per second did the car travel? How many feet per second did it travel? A mile is 5280 feet. Approximately how many miles per hour did it travel? You can round your answer.

4. Ben rode his mountain bike through an obstacle course full of difficult turns and jumps. He must finish the course in less than 20 minutes in order to qualify. The entire course is only a quarter mile long, but the trail is so challenging that he can only travel at an average speed of 1 mile per hour. At that rate, will he qualify for the race?

ANSWERS: Distance Over Rate Equals Time

1. Adam raced his mountain bike up an extremely steep and difficult trail on Mt. Stacko. By the end of the race, he had travelled 1 ½ miles and it took him 2 hours to complete. What was Adam's average speed during the race?

$\frac{1.5\ mile}{r} = 2\ hours$ $\frac{1.5\ miles}{2\ hours} = r$ $\frac{1.5\ miles}{2\ hours} = .75$ **.75 miles per hour**

2. Clara was typing an article for her blog. Her article contained 1475 words. She knew exactly what she wanted to write, so she typed it up in one sitting. It only took her 21 minutes to type it up. How many words per minute did she type? You can round your answer down to two decimal places.

$\frac{1475\ words}{r} = 21\ minutes$ $\frac{1475\ words}{21\ minutes} = r$ $\frac{1475\ words}{21\ minutes} = \mathbf{70.24\ words\ per\ minute}$

3. Thomas drove his Remote Controlled car as fast as it would go for 50 yards. It only took 8 seconds to go that far. How many yards per second did the car travel? How many feet per second did it travel? A mile is 5280 feet. Approximately how many miles per hour did it travel? You can round your answer.

$\frac{50\ yards}{r} = 8\ seconds$ $\frac{50}{8} = \mathbf{6.25\ yards\ per\ second}$

$6.25 * 3 = \mathbf{18.75\ feet\ per\ second}$

$\frac{5280\ feet}{18.75\ feet\ per\ second} = 281.6\ seconds/mile$ $\frac{281.6\ seconds}{60\ seconds} = 4.7\ minutes\ per\ mile$

$\frac{60\ minutes}{4.7} = \mathbf{12.77\ miles\ per\ hour}$

4. Ben rode his mountain bike through an obstacle course full of difficult turns and jumps. He must finish the course in less than 20 minutes in order to qualify. The entire course was only a quarter mile long, but the trail is so challenging that he can only travel at an average speed of 1 mile per hour. At that rate, will he qualify for the race?

$\frac{.25\ miles}{1\ mile\ per\ hour} = .25\ hours$ $.25\ hours = 15\ \mathbf{minutes}$

Yes he will qualify for the race!