**Distance, Rate, Time Practice**

**Speed is the same as Rate.**

***Formulas for Distance, Rate, Time problems:***

**Rate= Distance** *or* **r = d/t**

**Time**

**Distance = Rate x Time** *or*  **d = rt**

**Time = Distance** *or*  **t = d/r**

**Rate**

To solve these problems, follow these steps:

1. Make a table like this:

|  |  |  |
| --- | --- | --- |
| Variable | Number | Unit |
| d |  |  |
| r |  |  |
| t |  |  |

2. Read the problem and fill in the table with the information given along with the units used for each of the given variables.

3. Write down the formula you will use to find the unknown variable.

4. Plug the numbers into the formula and do the math.

5. Write your answer for the unknown in the table.

6. Write the units for the answer in the table.

7. Re-read the problem and answer any other questions asked.

8. Look at your answers and ask yourself, “Does this make sense?”

**PROBLEMS**

1. Egbert rides his bicycle for 3hrs at a speed of 40 km/h. What distance did he travel?
2. A train travels at a speed of 90km/h and travel a distance of 386km. How long did it take the train to complete its journey?
3. A car travels a distance of 540km in 6 hours. What was the car’s speed?
4. John is a runner. He runs the 100m sprint in 10.6s. At what speed did he travel?
5. A cyclist travels 20km in 4hrs. What is the cyclist’s speed?
6. The distance between two cities is 144km. At what speed would you have to travel to make it from one city to the other in 3 hours?
7. Jocelyn drives her car from her home to her aunt’s home, a distance of 576km away, in 6 hours. The speed limit is 90km/h. Did Jocelyn break the speed limit?
8. At the equator, the earth spins a distance of 41,830km every day. What speed does the Earth spin in km/h?
9. Lauren walks 100 meters in half a minute. What must her speed have been to travel this distance?
10. A mouse runs a distance of 2meters in 15 seconds. What is its speed?
11. Jim travelled at a speed of 18km/h for 2 hours. What was the distance covered?
12. Marc was told his dinner would be ready at 6:00PM. He left his house at noon and travelled in his car at an average speed of 100km/h to his mom’s house 482 km away. Did Marc make it home in time for dinner?
13. A whale swims at a constant speed of 8m/s for 17s. What distance did it travel?
14. Charlie writes down his run times for each day:

|  |  |
| --- | --- |
| Mon | 30 min |
| Tue | 45 min |
| Wed | 20 min |
| Thur | 60 min |
| Fri-Sun | No run |

He always runs at a constant speed of 15km/h.

a. What distance does he run each day?

b. On which day did he run the greatest distance?

1. How long does it take to drive a distance of 260 km at a speed of 75km/h?
2. How long does it take to travel a distance of 672km at a speed of 96km/h?
3. St. Augustine is a distance of 167km away from Orlando. You recently learned that if you flap your arms fast enough, you can fly at a constant speed of 50km/h. How long would it take you to fly to St. Augustine from Orlando?
4. A beetle travels at a speed of 9cm/s. It travels a distance of 108cm before it is caught in a jar. How long did the beetle run before it was caught?
5. Neil travelled 36km at a speed of 8km/h. Grant travelled 48km at a speed of 10km/h. Whose journey was quickest? By how many minutes?
6. Susie estimated that she can run for hours at a steady rate of 8km/h. She enters a marathon, a distance of 42.195km. How long should it take her to complete the race? Give answer in hours and minutes.
7. Mr. Dunn drives 64.8km from work at a speed of 48km/h. Mrs. Dunn drives 81.2km from work at a speed of 58km/h. They both leave work at the same time. Who arrives home first? How many minutes later is it before the second person gets home?
8. The earth takes one year to go round the sun. The distance travelled is 939,856,896 kilometers. If there are 365 days in a year, what speed does the earth travel in km/h? How far does it travel each day?