

**Scientific Notation – Multiplying and Dividing Word Problems and Practice**

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Class Period: \_\_\_\_\_

*Express all answers in Scientific Notation. Most statistics given are purely fictional.*

1. The Lucky Town Lottery has a jackpot of  $4.5 \times 10^7$  dollars. If Shirley and seven of her closest friends share the prize, how much will each lucky lotto player receive?
2. A piece of notebook paper is approximately  $1.3 \times 10^{-2}$  inches thick. Frankie cleaned out his math notebook and had a stack of 243 pieces of paper. How tall was his paper stack?
3. One size of a rectangular garden is  $7.87 \times 10^2$  feet. The other size measures  $5.04 \times 10^2$  feet. What is the size of the garden in square feet?
4. The speed of light is  $2.99 \times 10^8$  meters per second. It is  $1.49669180 \times 10^{11}$  m from the earth to the sun. How much time does it take light to travel from the sun to the earth?
5. The area of Australia is approximately  $7.7 \times 10^6$  km. If it were to be divided into states of about  $1.54 \times 10^6$  km, how many states would there be?
6. The Amazon River is  $6.4 \times 10^3$  km long. The Mississippi River is  $3.733 \times 10^3$  km. How many times longer is the Amazon River than the Mississippi River?
7. A microscopic ocean creature is  $2 \times 10^{-5}$  m in length. If you laid them end-to-end to form a chain of 1 m in length, how many creatures would be in the chain?

# Scientific Notation - Multiplying and Dividing Word Problems and Practice

Name: Kay Date: \_\_\_\_\_ Class Period: \_\_\_\_\_

Express all answers in Scientific Notation. Most statistics given are purely fictional.

1. The Lucky Town Lottery has a jackpot of  $4.5 \times 10^7$  dollars. If Shirley and seven of her closest friends share the prize, how much will each lucky lotto player receive?

$$\frac{4.5 \times 10^7}{8 \times 10^0} = 0.5625 \times 10^{7-1} = 5.625 \times 10^6$$

2. A piece of notebook paper is approximately  $1.3 \times 10^{-2}$  inches thick. Frankie cleaned out his math notebook and had a stack of 243 pieces of paper. How tall was his paper stack?

$$\frac{1.3 \times 10^{-2}}{243 \times 10^0} = 315.9 \times 10^{-2+2} = 3.159 \times 10^0$$

3. One size of a rectangular garden is  $7.87 \times 10^2$  feet. The other size measures  $5.04 \times 10^2$  feet. What is the size of the garden in square feet?

$$\begin{array}{r} 7.87 \times 10^2 \\ \times 5.04 \times 10^2 \\ \hline \end{array} = 39.6648 \times 10^{4+1} = 3.96648 \times 10^5$$

4. The speed of light is  $2.99 \times 10^8$  meters per second. It is  $1.49669180 \times 10^{11}$  m from the earth to the sun. How much time does it take light to travel from the sun to the earth?

$$\frac{1.49669180 \times 10^{11}}{2.99 \times 10^8} = 0.501 \times 10^{3-1} = 5.01 \times 10^2$$

5. The area of Australia is approximately  $7.7 \times 10^6$  km. If it were to be divided into states of about  $1.54 \times 10^6$  km, how many states would there be?

$$\frac{7.7 \times 10^6}{1.54 \times 10^6} = 5 \times 10^0$$

6. The Amazon River is  $6.4 \times 10^3$  km long. The Mississippi River is  $3.733 \times 10^3$  km. How many times longer is the Amazon River than the Mississippi River?

$$\frac{6.4 \times 10^3}{3.733 \times 10^3} = 1.71 \times 10^0$$

7. A microscopic ocean creature is  $2 \times 10^{-5}$  m in length. If you laid them end-to-end to form a chain of 1 m in length, how many creatures would be in the chain?

$$\frac{1 \times 10^{0+5}}{2 \times 10^{-5}} = 5 \times 10^{5-1} = 5 \times 10^4$$

$\triangle$   
 $D = rt$   
 $\frac{D}{r}$