Name Key Date _____

Scientific Notation Word Problems - Matching Worksheet

Write the letter of the answer that matches the problem.

D 1. The speed of an airplane is 2,000 mph for 7 hours. How far did the airplane travel?

(Remember: distance = speed x time (d = st)

$d = 2000(7) = 14000$, 1.4×10^4 D

a. 8.372×10^{-3} 2

E 2. How far does light travel in water in 5.0×10^2 seconds, if the speed of light in water is 3×10^8 m/s?

$(5 \times 10^2)(3 \times 10^8) = (5 \cdot 3) \times (10^2 \cdot 10^8)$

$= 15 \times 10^{10} = 1.5 \times 10^{11}$ E

b. 1.25×10^7

A 3. The Sun is 2.093×10^8 km (kilometers) from Mars and the speed of light is 2.5×10^8 m/s. Calculate the time it takes light, from the Sun, to reach Mars.

$\frac{2.093 \times 10^{11}}{2.5 \times 10^8} = 8.372 \times 10^2$ A

c. 4.393×10^6

B 4. Suppose there are 5×10^6 bacteria in every 2 liters of water. How many bacteria are there in 5 liters of water?

$\frac{5 \times 10^6}{2} = 2.5 \times 10^6 (5) = 12500000$

1.25×10^7 B

d. 1.4×10^4

C 5. Ron has to calculate the time taken by a sound wave to travel from Earth to Venus at the speed of 4.78×10^{12} miles per year (called a light-year). The distance between Earth and Venus is 2.1×10^{19} miles.

$\frac{2.1 \times 10^{19}}{4.78 \times 10^{12}} = 4393305$

4.393×10^6 C

e. 1.5×10^{11}