

8.EE.A.4: Operations with Scientific Notation 1b

- 1 What is the product of 8.4×10^8 and 4.2×10^3 written in scientific notation?
- 2 What is the product of (1.5×10^2) and (8.4×10^3) expressed in scientific notation?
- 3 What is the product of 12 and 4.2×10^6 expressed in scientific notation?
- 4 What is the product of (6×10^3) , (4.6×10^5) , and (2×10^{-2}) expressed in scientific notation?
- 5 What is the quotient of 8.05×10^6 and 3.5×10^2 ?
- 6 The quotient of (9.2×10^6) and (2.3×10^2) expressed in scientific notation is
- 7 If 3.85×10^6 is divided by 385×10^4 , the result is
- 8 What is the value of $\frac{6.3 \times 10^8}{3 \times 10^4}$ in scientific notation?
- 9 The expression $\frac{6 \times 10^{-7}}{3 \times 10^{-3}}$ is equivalent to
- 10 If $(7.6 \times 10^n)(3.5 \times 10^3) = 2.66 \times 10^9$, what is the value of n ?
- 11 What is the sum of 6×10^3 and 3×10^2 ?
- 12 State the value of the expression $\frac{(4.1 \times 10^2)(2.4 \times 10^3)}{(1.5 \times 10^7)}$ in scientific notation.
- 13 If the mass of a proton is 1.67×10^{-24} gram, what is the mass of 1,000 protons?
- 14 If the number of molecules in 1 mole of a substance is 6.02×10^{23} , then the number of molecules in 100 moles is
- 15 In 1995, the federal government paid off one-third of its debt. If the original amount of the debt was \$4,920,000,000,000, which expression represents the amount that was not paid off?
- 16 Two objects are 2.4×10^{20} centimeters apart. A message from one object travels to the other at a rate of 1.2×10^5 centimeters per second. How many seconds does it take the message to travel from one object to the other?
- 17 The distance from Earth to the imaginary planet Med is 1.7×10^7 miles. If a spaceship is capable of traveling 1,420 miles per hour, how many days will it take the spaceship to reach the planet Med? Round your answer to the *nearest day*.

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Answer Section

1 ANS:

$$3.528 \times 10^{12}$$

REF: 010927ia

2 ANS:

$$1.26 \times 10^6$$

REF: 061430ia

3 ANS:

$$5.04 \times 10^7$$

REF: 060927ia

4 ANS:

$$5.52 \times 10^7$$

REF: 061127ia

5 ANS:

$$2.3 \times 10^4$$

REF: fall0725ia

6 ANS:

$$4 \times 10^4$$

$$\frac{9.2 \times 10^6}{2.3 \times 10^2} = 4 \times 10^4$$

REF: 081006ia

7 ANS:

1

REF: 060207a

8 ANS:

$$2.1 \times 10^4$$

REF: 010319a

9 ANS:

$$2 \times 10^{-4}$$

REF: 011319ia

10 ANS:

5

$$\frac{26.6 \times 10^8}{3.5 \times 10^3} = 7.6 \times 10^5$$

REF: 061527ia

11 ANS:

$$6.3 \times 10^3$$

REF: 060628a

12 ANS:

$$6.56 \times 10^{-2}$$

REF: 081231ia

13 ANS:

$$1.67 \times 10^{-21} \text{ g}$$

REF: 060429a

14 ANS:

$$6.02 \times 10^{25}$$

REF: 010018a

15 ANS:

$$3.28 \times 10^{12}$$

REF: 060815b

16 ANS:

$$2.0 \times 10^{15}$$

$$\frac{\text{distance}}{\text{speed}} = \frac{2.4 \times 10^{20} \text{ c}}{1.2 \times 10^5 \text{ cps}} = 2.0 \times 10^{15} \text{ s}$$

REF: 060308b

17 ANS:

$$499. \frac{\text{distance}}{\text{speed}} = \frac{1.7 \times 10^7 \text{ miles}}{1420 \text{ mph}} \approx 11972 \text{ hours} \approx 499 \text{ days}$$

REF: 060029a