

NAME: \_\_\_\_\_

*A.N.4: Understand and use scientific notation to compute products and quotients of numbers.*

1. 060927ia, P.I. A.N.4

What is the product of 12 and  $4.2 \times 10^6$  expressed in scientific notation?

- [A]  $50.4 \times 10^6$  [B]  $5.04 \times 10^6$   
[C]  $5.04 \times 10^7$  [D]  $50.4 \times 10^7$

2. 010927ia, P.I. A.N.4

What is the product of  $8.4 \times 10^8$  and  $4.2 \times 10^3$  written in scientific notation?

- [A]  $12.6 \times 10^{11}$  [B]  $3.528 \times 10^{12}$   
[C]  $35.28 \times 10^{11}$  [D]  $2.0 \times 10^5$

3. 060207a, P.I. A.N.4

If  $3.85 \times 10^6$  is divided by  $385 \times 10^4$ , the result is

- [A]  $3.85 \times 10^{10}$  [B] 0.01  
[C]  $3.85 \times 10^4$  [D] 1

4. 010319a, P.I. A.N.4

What is the value of  $\frac{6.3 \times 10^8}{3 \times 10^4}$  in scientific notation?

- [A]  $2.1 \times 10^4$  [B]  $2.1 \times 10^2$   
[C]  $2.1 \times 10^{-2}$  [D]  $2.1 \times 10^{-4}$

5. fall0725ia, P.I. A.N.4

What is the quotient of  $8.05 \times 10^6$  and  $3.5 \times 10^2$ ?

- [A]  $2.3 \times 10^4$  [B]  $2.3 \times 10^3$   
[C]  $2.3 \times 10^8$  [D]  $2.3 \times 10^{12}$

6. 010018a, P.I. A.N.4

If the number of molecules in 1 mole of a substance is  $6.02 \times 10^{23}$ , then the number of molecules in 100 moles is

- [A]  $6.02 \times 10^{22}$  [B]  $6.02 \times 10^{24}$   
[C]  $6.02 \times 10^{25}$  [D]  $6.02 \times 10^{21}$

7. 060429a, P.I. A.N.4

If the mass of a proton is  $1.67 \times 10^{-24}$  gram, what is the mass of 1,000 protons?

- [A]  $1.67 \times 10^{-23}$  [B]  $1.67 \times 10^{-22}$   
[C]  $1.67 \times 10^{-27}$  [D]  $1.67 \times 10^{-21}$

8. 060815b, P.I. A.N.4

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?

- [A]  $1.64 \times 10^{12}$  [B]  $1.64 \times 10^4$   
[C]  $3.28 \times 10^8$  [D]  $3.28 \times 10^{12}$

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[1] C

[2] B

[3] D

[4] A

[5] A

[6] C

[7] D

[8] D