

## 9.4 Practice

Write the number in scientific notation.			
1. <u>72,000,000</u> $7.2 \times 10^7$	2. <u>0.0046</u> $4.6 \times 10^{-3}$	3. <u>90,000,000</u> $9 \times 10^7$	4. <u>0.00005</u> $5 \times 10^{-5}$
5. <u>45,900,000,000</u> $4.59 \times 10^{10}$	6. <u>0.000279</u> $2.79 \times 10^{-4}$	7. <u>-0.000015</u> $-1.5 \times 10^{-5}$	8. <u>-30</u> $-3 \times 10^1$

**Multiple Choice**

9.  $5.4004 \times 10^{10}$   
 ★ **MULTIPLE CHOICE** Which number represents 54,004,000,000 written in scientific notation? C

(A)  $54004 \times 10^6$                        (B)  $54.004 \times 10^9$   
 (C)  $5.4004 \times 10^{10}$                        (D)  $0.54004 \times 10^{11}$

Write the number in standard form.			
10. $2.6 \times 10^3$ <u>2,600</u> $2,600$	11. $7.5 \times 10^7$ <u>75,000,000</u> $75,000,000$	12. $1.11 \times 10^2$ <u>111</u> $111$	13. $4.709 \times 10^{-6}$ <u>0.000004709</u> $0.000004709$
14. $6.1 \times 10^{-3}$ <u>0.0061</u> $0.0061$	15. $4.4 \times 10^{-10}$ <u>0.00000000044</u> $0.00000000044$	16. $6.477 \times 10^9$ <u>6,477,000,000</u> $6,477,000,000$	17. $2.852 \times 10^{-5}$ <u>0.00002852</u> $0.00002852$

**Error Analysis**

18. **ERROR ANALYSIS** Describe and correct the error in writing  $1.24 \times 10^{-3}$  in standard form.

$0.00124$

negative move left not right

$1.24 \times 10^{-3} = 1240$  X

0.0124

Fill in the blank with $<$ , $>$ , or $=$ .	
19. $5.6 \times 10^3$ <u><math>&lt;</math></u> 56,000 $5,600$	20. $9.86 \times 10^{-3}$ <u><math>=</math></u> 0.00986 $0.00986$
21. $4.5 \times 10^6$ <u><math>&gt;</math></u> 450,000 $4,500,000$	22. $0.0000000006$ <u><math>&lt;</math></u> $6 \times 10^{-9}$ $6 \times 10^{-10}$

Evaluate the expression. Write your answer in scientific notation.

23.  $(4.4 \times 10^3)(1.5 \times 10^{-7})$

$$6.6 \times 10^{-4}$$

24.  $(7.63 \times 10^{-5})(5.8 \times 10^2)$

$$44.254 \times 10^{-3}$$

$$4.4254 \times 10^{-2}$$

25.  $(8.1 \times 10^{-4})(9 \times 10^{-6})$

$$72.9 \times 10^{-10}$$

$$7.29 \times 10^{-9}$$

26.  $\frac{6 \times 10^{-3}}{8 \times 10^{-6}}$   $10^{-3+6} = 10^3$

$$0.75 \times 10^3$$

$$7.5 \times 10^2$$

27.  $\frac{5.4 \times 10^{-5}}{1.8 \times 10^{-2}}$   $10^{-5+2} = 10^{-3}$

$$3 \times 10^{-3}$$

28.  $\frac{4.1 \times 10^4}{8.2 \times 10^8}$

$$0.5 \times 10^{-4}$$

$$5 \times 10^{-5}$$

29.  $(5 \times 10^{-8})^5$

$$5^5 \times 10^{-40}$$

$$3125 \times 10^{-40}$$

$$3.125 \times 10^{-37}$$

30.  $(7 \times 10^{-5})^4$

$$7^4 \times 10^{-20}$$

$$2401 \times 10^{-20}$$

$$2.401 \times 10^{-17}$$

31.  $(1.4 \times 10^3)^2$

$$1.4^2 \times 10^6$$

$$1.96 \times 10^6$$

Multiple Choice

32.

★ **MULTIPLE CHOICE** Which number is the value of  $\frac{1.235 \times 10^4}{9.5 \times 10^7}$ ?  $0.13 \times 10^{-3}$   
 $1.3 \times 10^{-4}$

(A)  $0.13 \times 10^{-4}$

(B)  $1.3 \times 10^{-4}$

(C)  $1.3 \times 10^{-3}$

(D)  $0.13 \times 10^3$

B