

# Chapter Test

# Form A

## Chapter 6

**Write each number in standard form.**

1.  $3 \times 10^5$  \_\_\_\_\_      2.  $7.0 \times 10^2$  \_\_\_\_\_  
 3.  $5.8 \times 10^{-3}$  \_\_\_\_\_      4.  $1.64 \times 10^{-2}$  \_\_\_\_\_

**Write each number in scientific notation.**

5. 200,000 \_\_\_\_\_      6. 0.0982 \_\_\_\_\_  
 7. 45,000 \_\_\_\_\_      8. 0.360 \_\_\_\_\_  
 9. 570,000,000 \_\_\_\_\_

**Write each expression using a single exponent.**

10.  $f^7 \cdot f^0$  \_\_\_\_\_      11.  $(-x)^3 \cdot (-x)^4$  \_\_\_\_\_      12.  $4^2 \cdot 4^3 \cdot 4^4$  \_\_\_\_\_  
 13.  $\frac{y^2}{y^2}$  \_\_\_\_\_      14.  $7^8 \div 7^5$  \_\_\_\_\_      15.  $y^5 \cdot y^{-3}$  \_\_\_\_\_

**Simplify each expression.**

16.  $\frac{3^8}{3^2}$  \_\_\_\_\_      17.  $\frac{6^3}{6^3}$  \_\_\_\_\_  
 18.  $\frac{(-8)^{15}}{(-8)^9}$  \_\_\_\_\_      19.  $\frac{125^{12}}{125^2}$  \_\_\_\_\_

**Multiply or divide. Write the answer in scientific notation.**

20.  $(2.14 \times 10^4)(3 \times 10^2)$  \_\_\_\_\_      21.  $(9.8 \times 10^3)(1 \times 10^5)$  \_\_\_\_\_      22.  $\frac{5.5 \times 10^4}{2 \times 10^2}$  \_\_\_\_\_

**Simplify each expression.**

23.  $8^0$  \_\_\_\_\_      24.  $b^{-6}$  \_\_\_\_\_      25.  $2^3$  \_\_\_\_\_  
 26.  $2^{-3}$  \_\_\_\_\_      27.  $d^0 \cdot d^{-4}$  \_\_\_\_\_      28.  $g^3 \cdot g^{-3}$  \_\_\_\_\_