Module 6 – Chapter 8 Practice Test

1. Write a term with a base of x, an exponent of 4 and a coefficient of 3.

2. Write in exponential form: a•a•a•5•5•b•c•c•c•c•c

#3-12, Simplify all below:

3) $\frac{x^5}{x^2}$ 4) $(y^2)^5$ 5.) $a^4 \cdot a$ 6) $\frac{a^0}{a^7}$

7) $\frac{x^2 \cdot x^5 b^9}{x^9 x^0}$ 8) $(3x^{-5}y^2)^3$ 9) $4x(3x^2 + 2x) - 6x^2 - 15x^3$

10) $\frac{(3x^4y^{-2})^2}{18xy^3}$ 11) $\frac{3a^4b^5}{a^3} \bullet \frac{2a^3b}{4b^8}$ 12) $\left(\left(\frac{2x^4y^{-1}}{x}\right)^{-3}\right)^2$

13. Write 4,567,800,000 in scientific notation.

14. Write 8.7×10^{-3} as a decimal.

15. Find the value for the ? in each situation.

a. $3^{?} = 81$ b. $(2x^2y^{?})(-5x^{-4}y^7) = \frac{-10y^3}{x^2}$ c. $19^{?} = 1$

16. Write 0.00066 in scientific notation.

17. Write 4×10^6 as a decimal.

18. The following problem has an incorrect solution. Explain the mistake and find the correct solution.
$(x^3y^4)(x^3y^4) = 2x^3y^4$