Objective 10

Simplify. Write your answers using exponents.

1. $4^4 \cdot 4 \cdot 4^6$ 2. $(y^3)^4$ 3. $\dfrac{d^9}{d^5}$ 4. $\dfrac{8a^7b^2}{6a^3b^5}$ 5. $(5x^2y^5z)^0$

Simplify. No negative exponents.

6. $(-3m^6)^4$ 7. $(\dfrac{4xy^2}{z^3})^3$ 8. $\dfrac{2^5 \cdot 2^3}{2^6}$ 9. 5^{-2}

10. 6^2c^{-4} 11. $x^2 \cdot x^{-9} \cdot x^3$ 12. mn^{-6}

Objective 11

13. Write 725,000 in scientific notation.   14. Write 5.2×10^{-3} in standard form.

15. $3.42 \times 10^4 \cdot 5.17 \times 10^3 =$ 16. $\dfrac{7.5852 \times 10^6}{2.52 \times 10^{-3}} =$

17.   After your most recent haircut you lost a little weight as a result of having less hair. Which of the following could be the amount of weight loss due to the hair?

a) 4.2×10^5 lbs   c) 1.752×10^8 lbs

b) 2.05×10^3 lbs   d) 3.07×10^{-4} lbs