

1. Write in simplest exponent form.

$$(-7)(x)(y)(z)(x)(y)(z)(y)$$

The expression written in simplest exponent form is . (Do not factor.)

2. Multiply and simplify.

$$r^6 \cdot r^2$$

$$r^6 \cdot r^2 = \text{}$$

(Simplify your answer. Type exponential notation with positive exponents.)

3. Use the product rule to simplify.

$$(-8x^3)(6x^5)$$

$$(-8x^3)(6x^5) = \text{}$$

(Simplify your answer. Type exponential notation with positive exponents.)

4. Multiply.

$$(8x^4)(12x)$$

$$(8x^4)(12x) = \text{}$$

5. Multiply.

$$(5wz^5)(4w^2z^3)$$

$$(5wz^5)(4w^2z^3) = \text{}$$

(Simplify your answer. Type your answer using exponential notation.)

6. Multiply.

$$(8a)(2a^6b)(0)$$

$$(8a)(2a^6b)(0) = \text{}$$

(Simplify your answer. Type your answer using exponential notation.)

7. Divide. Assume that the variable in the denominator is nonzero.

$$\frac{y^{12}}{y^5}$$

$$\frac{y^{12}}{y^5} = \boxed{} \text{ (Simplify your answer. Type your answer using exponential notation.)}$$

8. Divide. Assume that all variables in any denominator are nonzero.

$$\frac{y^2}{y^5}$$

$$\frac{y^2}{y^5} = \boxed{} \text{ (Simplify your answer. Type exponential notation with positive exponents.)}$$

9. Divide. Assume that all variables in the denominator are nonzero.

$$\frac{x^{15}}{7x^8}$$

$$\frac{x^{15}}{7x^8} = \boxed{} \text{ (Simplify your answer. Type your answer using exponential notation.)}$$

10. Divide. Assume that all variables in the denominator are nonzero.

$$\frac{15a^8b}{-60a^2b^3}$$

$$\frac{15a^8b}{-60a^2b^3} = \boxed{}$$

(Simplify your answer. Use integers or fractions for any numbers in the expression. Type exponential notation with positive exponents.)

11. Simplify.

$$(c^9)^5$$

$$(c^9)^5 = \boxed{} \text{ (Simplify your answer.)}$$

Time: 6:19 AM

Book: Tobey: Beginning and Intermediate
Algebra, 4e

Assignment: Week 7: Homework 8.1

12. Simplify.

$$(2x^5y^2z)^2$$

$$(2x^5y^2z)^2 = \square \text{ (Simplify your answer.)}$$

13. Simplify.

$$(-3n^3)^2$$

$$(-3n^3)^2 = \square \text{ (Simplify your answer.)}$$

14. Simplify.

$$\left(\frac{3x}{4y^3}\right)^2$$

$$\left(\frac{3x}{4y^3}\right)^2 = \square$$

15. Simplify.

$$(-3x^2y^0z^2)^4$$

$$(-3x^2y^0z^2)^4 = \square \text{ (Type exponential notation with positive exponents.)}$$

16. Simplify. Assume that variable c is nonzero.

$$c^{-3}$$

$$c^{-3} = \square \text{ (Use positive exponents only. Simplify your answer.)}$$

17. Simplify. Assume that variable a is nonzero.

$$\frac{1}{a^{-9}}$$

$$\frac{1}{a^{-9}} = \square \text{ (Use positive exponents only. Simplify your answer.)}$$

18. Simplify. Express your answer with positive exponents. Assume that all variables are nonzero.

$$\frac{x^{-5}y^{-9}}{z^{-3}}$$

$$\frac{x^{-5}y^{-9}}{z^{-3}} = \square$$

19. Simplify. Assume that variable z is nonzero.

$$y^3z^{-6}$$

$$y^3z^{-6} = \square \text{ (Use positive exponents only. Simplify your answer.)}$$

20. Simplify. Assume that variable b is nonzero.

$$8b^{-4}$$

$$8b^{-4} = \square \text{ (Use positive exponents only. Simplify your answer.)}$$

21. Simplify. Express the answer with positive exponents.

$$\left(\frac{5xy^{-4}}{z^2}\right)^2$$

$$\left(\frac{5xy^{-4}}{z^2}\right)^2 = \square$$

(Simplify your answer. Use integers or fractions for any numbers in the expression. Use positive exponents only.)

22. Evaluate $(8)^{5/3}$.

$$(8)^{5/3} = \square \text{ (Type an integer.)}$$

23. Evaluate $(100)^{3/2}$.

$$(100)^{3/2} = \square \text{ (Type an integer.)}$$

24. Simplify the given expression.

$$225^{-1/2}$$

$$225^{-1/2} = \square \text{ (Type an integer or a fraction.)}$$

25. Simplify the following expression and express the answer with positive exponents. Evaluate or simplify the numerical expressions.

$$(27)^{-5/3}$$

$$(27)^{-5/3} = \square \text{ (Type an integer or a simplified fraction.)}$$