

Name _____

Instructor _____

Date _____

SHOW YOUR WORK!

The skills needed to complete this worksheet are required for our work in Chapter 3. Please seek help as soon as possible if you have difficulty completing any of these sections.

Learning Objectives

- A. Evaluate expressions containing exponents.
- B. Write fractions in simplest form.
- C. Evaluate algebraic expressions.
- D. Identify like terms and unlike terms.
- E. Combine like terms.
- F. Use the distributive property.
- G. Perform long division.

OBJECTIVE A: Evaluate expressions containing exponents. (See Example 1, p. 19, and Example 8, p. 49)

1. Evaluate each expression.

a) $(0.6)^2$

b) $(-5)^2$

c) -2^2

d) $\left(\frac{2}{3}\right)^3$

e) $-(-4)^3$

f) -1^5

OBJECTIVE B: Write fractions in simplest form. (See Example 8, p. R-11)

Simplify.

2. $\frac{9}{27}$

3. $-\frac{10}{35}$

4. $\frac{8}{12y}$

5. $\frac{9p}{15p}$

6. $\frac{40h}{160hp}$

7. $\frac{18xy}{45x}$

OBJECTIVE C: Evaluate algebraic expressions. (See Example 7, p. 22)

Evaluate each expression for the given value of the variable.

8. $3x^2$ for $x = -4$

9. $x^3 - x^2$ for $x = -3$

OBJECTIVE D: Identify like terms and unlike terms. (See Example 2, p. 69)

10. Indicate whether the terms in each list are like or unlike.

a) $-6x, 3x$

b) $15m^5, 5m^7$

c) $2x^3yz^2, x^3yz$

d) $4ab, -\frac{1}{2}ba$

OBJECTIVE E: Combine like terms. (See Example 3, p. 69)

Simplify each expression.

11. $-2 - x + 2y - 4y + 5x$

12. $0.3x + 0.9 - 1.2x - 2.5 + x$

OBJECTIVE F: Use the distributive property. (See Example 5, p. 52)

Simplify each expression.

13. $3(7x - 9)$

14. $-2(-6y - 10)$

15. $6(4x - 3y - 9)$

16. $-(-7m - 3n - 9)$

OBJECTIVE G: Perform long division.

Divide.

17. $907 \div 8$

18. $5136 \div 16$

19. $27 \overline{)3110}$

20. $48 \overline{)2984}$