

Name:

Version 2

Pre-Algebra & Algebra Review Questions

Evaluate and simplify as much as possible.

1. Order of Operations (PEMDAS)

a. $6 - (4 - 5) + 18 \div (-1 + 4)^2 =$

b. $-2(x - 3)^2 + \frac{6(2 + x - 1)}{-2} =$

2. Integers: *Adding/Subtracting*

a. $-4 + -9 =$

b. $-5 + 8 =$

c. $45 - (-5) =$

3. Integers: *Multiplying/Dividing*

f. $-13 * -3 =$

g. $-36 \div 3 =$

4. Adding/Subtracting Polynomials (like terms)

a. $x^2 - 3x + 7 - 7x - 11x^2 =$

b. $2x + 6y - 2xy - 6x + 8xy =$

5. Distribution

a. $3\left(8 - \frac{3}{x + 2}\right) =$

b. $7x(x + 4) =$

6. FOIL

a. $(x - 7)(x - 3) =$

b. $(x + 9)(x - 4) =$

7. Factoring (*Factor the following*)

a. $x^2 + 3x + 2 =$

b. $x^2 - 10x - 11 =$

c. $x^2 - 1 =$

d. $3x^3 - 15x^2 - 9x =$

8. Solving

a. $\frac{x}{3} + 7 = -2$

b. $x^2 = 16$

c. $\sqrt{x} = 7$

d. $2(x - 3) - 1 = 13 - 3(x + 2)$

9. Exponents

a. $x^{3/2} * x^{3/2} =$

b. $(x^{1/2})^{5/2} =$

10. Rational Equations

a. Simplify: $\frac{x^2(x^2 - 1)}{x^2 + x}$

11. Rational Expressions

a. $\frac{x^2 - 1}{x + 3} * \frac{x^2 - 9}{x - 1}$

b. $\frac{y - 2}{y + 2} \div \frac{y - 2}{y^2 - 4}$