

Pre-Calculus 10 Review and Preview

Name: _____

Date: _____

Fractions

Simplify the following. Show all work.

1. $\frac{1}{5} + \frac{2}{7}$

2. $\frac{\left(\frac{2}{3}\right)}{\left(\frac{4}{5}\right)}$

3. $\frac{\frac{1}{2} - 2}{3}$

Evaluating Algebraic ExpressionsEvaluate the following algebraic expressions for $x = 2$, $y = 3$, and $z = -3$.

1. $2x + y - 5$

2. $x - 3y$

3. $-2x - y + 4z$

Algebra

Solve the following equations for the given variable.

1. $2x - 3 = 5$

2. $3x - 4 = x - 12$

3. $2(2x + 1) = 5$

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4. $3(x + 2) - 4 = 11$

5. $\frac{4x}{3} = 8$

6. $\frac{2(5x-3)+1}{5} = 7$

Systems of Equations

Solve the following systems of equations using the indicated method.

1. Solve $4x + 5y = 26$ by substitution.
 $3x = y - 9$

2. Solve $5x + 4y = 26$ by elimination.
 $3x + 2y = 15$

Factoring

Factor the following polynomials, completely.

1. (a) $9b^2 - 12b^3$

(b) $-7d - 14d^4$

(c) $24x + 30x^2 - 12x^4$

(d) $x^2 + 10x + 24$

(e) $x^2 + 7x + 6$

(f) $m^2 - 7m + 12$

(g) $b^2 - 15b + 50$

(h) $n^2 - n - 20$

(i) $x^2 - 2x - 48$

(j) $4y^2 - 20y - 56$

(k) $-5n^2 + 40n - 35$

(l) $7c^2 - 35c + 42$

(m) $2n^2 + 13n + 6$

(n) $5a^2 - 7a - 6$

(o) $4x^2 + 11x + 6$