Assignment 17

Practice with the Quadratic Formula

Use the Quadratic Formula
$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$
to solve the following equations.

Basic Practice

1. $x^2 - 8x + 5 = 0$

2. $2x^2 - 4x - 1 = 0$

3. $3x^2 + 6x + 1 = 0$

Set Equal to Zero Practice

4. $x^2 - 1 = 3x + 4$

5. $7x - 4 = 2x^2$

6. $-5x^2 = 4x - 2$

Clear "a" Practice

7. $2x^2 - 10x + 2 = 0$

8. $-3x^2 - 3x + 12 = 0$

9. $5x^2 - 20x - 30 = 0$

Simplify Radical Expressions

Simplify each radical expression.

1. $x^3 y \sqrt{x^3 y^5 z^7}$

2. $yz^3 \sqrt{12x^2 y^4 z^5}$

3. $3xy^2 z^3 \sqrt{8xy^4 z^3}$

4. $6x^3 yz^3 \sqrt{9x^4 yz^2}$

5. $z^2 \sqrt{25x^2 y^4 z^6}$

More Practice with Quadratics

*Solve by factoring, completing the square or "**isolating** x^2."*

1. $x^2 + 4x - 5 = 0$

2. $x^2 + 6x + 8 = 0$

3. $45 + 2x^2 = 5x^2 - 15$

4. $x^2 + 18 = 6 + 8x$

Negative Exponent Practice

Simplify, writing all exponents as positive.

1. $\dfrac{3x^{-6}}{y^{-5}}$

2. $\dfrac{4a^{-1}}{8b^2}$

3. $\dfrac{6xy^2}{2x^{-2}y^3}$

4. $\dfrac{-10a^0 b^{-3} c^4}{-2a^3 b^{-3} c^{-1}}$

5. $\dfrac{a^3 b^2 c^{-2}}{-3a^5 b^{-2}}$

6. $\dfrac{-4x^3 y^{-3} z^0}{-10x^{-2} yz^{-1}}$