Assignment 13

Simplify each radical expression.

1. $3\sqrt{24}$

2. $2\sqrt{16}$

3. $\sqrt{40}$

4. $3\sqrt{8}$

5. $5\sqrt{12}$

6. $2\sqrt{27}$

7. $5\sqrt{75}$

8. $9\sqrt{81}$

Simplify the expressions by adding or subtracting the appropriate terms. Remember to simplify all radicals first.

1. $3\sqrt{15} + \sqrt{20} + \sqrt{27} - \sqrt{45}$

2. $5\sqrt{2} - \sqrt{50} + \sqrt{75} + \sqrt{30}$

3. $1 + 2\sqrt{9} + 5\sqrt{4} + \sqrt{36} - 10$

4. $5\sqrt{3} + 3\sqrt{5} - \sqrt{9} + 5\sqrt{12}$

5. $6\sqrt{8} - 3\sqrt{50} + 5\sqrt{18} + \sqrt{2}$

6. $6\sqrt{25} - 3\sqrt{64} + 5\sqrt{27} + \sqrt{12}$

Name _____

Solve by factoring. Remember you have to set the equation to zero before factoring.

1. $x^2 + 7x + 25 = 4 - 3x$

2. $x^3 - 9x = 18 - 2x^2$

3. $x^2 + 14 = 9x$

These are mix of radical equations. Always **ISOLATE** *the radical if necessary first and then square and proceed to solve for* ***x***.

1. $\sqrt{3x-2} = 5$

2. $\sqrt{4x} = \sqrt{5x-13}$

3. $10 = 2\sqrt{4x+4} - 6$

4. $6 = \sqrt{4x+8}$

5. $\sqrt{7x-12} = \sqrt{3x+20}$

6. $\sqrt{x^2-8x} = 3$

7. $2\sqrt{x+5} + 7 = 15$

8. $6 = \sqrt{x^2-5x}$

9. $5\sqrt{3x} = 30$

10. $12 - 4\sqrt{x-10} = -20$

11. $10 = \sqrt{2x-8}$

12. $8 = \sqrt{20x+4}$