Solving Quadratic Equations by Factoring

Quadratic Equation - An equation of the form $ax^2 + bx + c = 0$, where a, b and c are real numbers and $a \neq 0$.

Step 1: Set the equation equal to zero.

Step 2: Factor.

Step 3: Set each factor equal to zero and solve for the variable.

Directions: Solve each quadratic equation by factoring.

1. $16x^2 - 1 = 0$

2. $3x^2 - 15x - 18 = 0$

3. $x^3 - 12x^2 = -35x$

4. $16x^2 + 24x + 9 = 0$

5. $2x^2 = 19x + 33$

6. $\dfrac{3}{4}x^2 - x - 16 = 0$

7. $6x^2 - 3x = 21 + 2x$