

## Solving Quadratics - The Zero Product Property

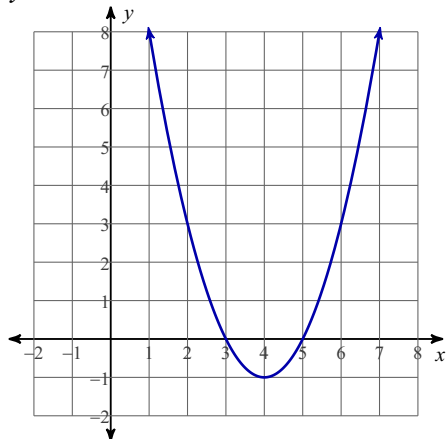
**Class Examples: Factor Completely**

1)  $x^2 - 8x + 15$

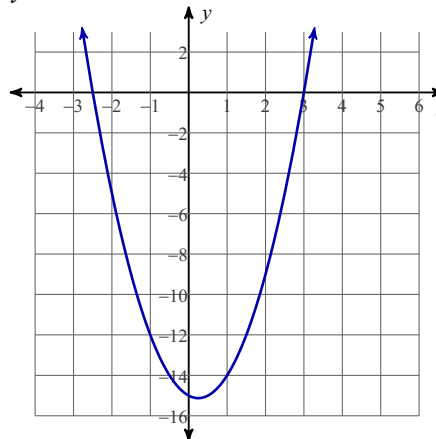
2)  $2x^2 - x - 15$

**Looking at the graph below, determine which x-values would make the entire function equal to zero.**

3)  $y = x^2 - 8x + 15$



4)  $y = 2x^2 - x - 15$

**Class Examples: Solve each equation by factoring.**

5)  $(m - 3)(m + 3) = 0$

6)  $(3n - 2)(n - 1) = 0$

7)  $n^2 - 6n = 0$

8)  $m^2 + 3m - 28 = 0$

9)  $x^2 - 3x - 6 = 4$

10)  $r^2 + 5r - 20 = 4$

11)  $2b^2 + 1 = -3b$

12)  $8x^2 + 18x + 5 = 2x + 5x^2$

**HOMEWORK: Solve each equation by factoring.**

13)  $(2x + 1)(2x + 5) = 0$

14)  $(7x - 5)(x - 4) = 0$

15)  $r^2 - 6r + 5 = 0$

16)  $n^2 + n - 6 = 0$

17)  $x^2 - 2x = 0$

18)  $a^2 - 64 = 0$

19)  $n^2 + 4n - 18 = -6$

20)  $n^2 - 6n - 5 = -5$

21)  $2x^2 + 9x = -9$

22)  $4v^2 + 4v = 3$

23)  $3m^2 - 7m + 3 = 3m$

24)  $4x^2 - 7x = 2x^2 - 6$