

Solve By Factoring Notes

<p>Standard Form Always!</p> $ax^2 + bx + c = 0$	<p>1. <math>8x^2 - 14x = 0</math></p> $2x(4x - 7) = 0$ $2x = 0 \quad 4x - 7 = 0$ $x = 0 \quad 4x = 7$ $x = 7/4$
<p>2. <math>3x^2 - 8x = -2x</math></p> $3x^2 - 8x + 2x = 0$ $3x^2 - 6x = 0$ $3x(x - 2) = 0$ $3x = 0 \quad x - 2 = 0$ $x = 0 \quad x = 2$	<p>3. <math>x^2 - x = 0</math></p> $x(x - 1) = 0$ $x = 0 \quad x - 1 = 0$ $x = 1$
<p>4. <math>x^2 - 5x + 6 = 0</math></p> $(x - 3)(x - 2) = 0$ $x - 3 = 0 \quad x - 2 = 0$ $x = 3 \quad x = 2$	<p>5. <math>x^2 + 9x = -8</math></p> $x^2 + 9x + 8 = 0$ $(x + 8)(x + 1) = 0$ $x + 8 = 0 \quad x + 1 = 0$ $x = -8 \quad x = -1$
<p>6. <math>x^2 + x = 30</math></p> $x^2 + x - 30 = 0$ $(x + 6)(x - 5) = 0$ $x + 6 = 0 \quad x - 5 = 0$ $x = -6 \quad x = 5$	<p>7. <math>3k^2 + 5k = 12</math></p> $3k^2 + 5k - 12 = 0$ $(3k - 4)(k + 3) = 0$ $3k - 4 = 0 \quad k + 3 = 0$ $3k = 4 \quad k = -3$ $k = \frac{4}{3}$

① Set each factor to 0  
② Solve each factor