

**DAY 1: SOLVING BY FACTORING**

Factor each of the following quadratic trinomials.

1)  $x^2 + 5x + 6$

$(x+2)(x+3)$

2)  $x^2 + 9x + 8$

$(x+8)(x+1)$

3)  $x^2 - x - 2$

$(x-2)(x+1)$

4)  $4x^2 + 12x + 5$

$4x^2 + 10x + 2x + 5$   
 $(2x+1)(2x+5)$

5)  $3x^2 + 19x + 6$

$3x^2 + 18x + x + 6$   
 $(3x+1)(x+6)$

6)  $6x^2 - 7x - 5$

$6x^2 + 3x - 10x - 5$   
 $(3x-5)(2x+1)$

$\frac{12}{10+2} \mid \frac{20}{10 \cdot 2}$

$\frac{+19}{181} \mid \frac{18}{18 \cdot 1}$

$\frac{-7}{-10+3} \mid \frac{-30}{-10 \cdot 3}$

Solve each of the following quadratic equations.

7)  $x^2 - 4x - 12 = 0$

$x=6, x=-2$

$\frac{-4}{-6+2} \mid \frac{-12}{-6 \cdot 2}$

10)  $6x^2 - 17x + 5 = 0$

$x = \frac{1}{3}, \frac{5}{2}$

8)  $x^2 - 11x + 18 = 0$

$x=9, x=2$

$\frac{-11}{-9+2} \mid \frac{18}{9 \cdot 2}$

11)  $2x^2 - x - 21 = 0$

$x = -3, \frac{7}{2}$

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

$x=2$   
 $x=-1$

12)  $2x^2 + 5x - 3 = 0$

~~$x = -3, \frac{1}{2}$~~   
 $x = -3, \frac{1}{2}$

$\frac{5}{6-1} \mid \frac{-6}{6 \cdot 1}$

$2x^2 + 6x - 1x - 3$   
 $2x(x+3) - 1(x+3)$

⑪  $\frac{-x}{-7+6} \mid \frac{-42}{6 \cdot 7}$

$2x^2 + 6x - 7x - 21$   
 $2x(x+3) - 7(x+3)$   
 $(2x-7)(x+3)$

⑩  $\frac{-17}{-15-2} \mid \frac{30}{15 \cdot 2}$

$6x^2 - 2x - 15x + 5$   
 $2x(3x-1) - 5(3x-1)$   
 $(2x-5)(3x-1)$