$x = -1$ $\quad$ $x = -2$

$+1$ $\quad$ $+2$

$x + 1 = 0$ $\quad$ $x + 2 = 0$

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

$x^2 + 3x + 2$

y-int = 2

$x = -5$ $\quad$ $x = 7$

$x + 5 = 0$ $\quad$ $x - 7 = 0$

$(x+5)(x-7)$

$x^2 - 7x + 5x - 35$

$x^2 - 2x - 35$

y-int = -35

$x = -5$ $\quad$ $x = 8$

$x + 5 = 0$ $\quad$ $x - 8 = 0$

$(x+5)(x-8)$

$x^2 - 8x + 5x - 40$

$x^2 - 3x - 40$

y-int = -40

Solving Quadratic Equations by Factoring

Date_____ Period____

Solve each equation by factoring.

1) $(k+1)(k-5)=0$

2) $(a+1)(a+2)=0$

3) $(4k+5)(k+1)=0$

4) $(2m+3)(4m+3)=0$

5) $x^2-11x+19=-5$

+5 +5

$x^2-11x+24=0$

$(x-8)(x-3)$

(Finding x intercept)

$x-8=0$ $x-3=0$

$x=8$ $x=3$

24, -8, -3, -11

6) $n^2+7n+15=5$

-5 -5

$n^2+7n+10$

$(n+5)(n+2)$

$n+5=0$ $n+2=0$

$x=-5$ $x=-2$

10, 5, 2, 7

7) $n^2-10n+22=-2$

+2 +2

$n^2-10n+24$

$(n-6)(n-4)$

$n-6=0$ $n-4=0$

$n=6$ $n=4$

24, -6, -4, -10

8) $n^2+3n-12=6$

-6 +6

$n^2+3n-18$

$(n+6)(n-3)$

$n+6=0$ $n-3=0$

$n=-6$ $n=+3$

-18, +6, -3, 3

9) $6n^2-18n-18=6$

-6 -6

$\frac{6n^2-18n-24}{6}$

n^2-3n-4

-4, -4, 1, -3

$6(n-4)(n+1)$

10) $7r^2-14r=-7$