Algebra 2 Quadratics Review Assignment

Name Key ID: 1

Date _____ Period ____

Solve each equation by factoring.

1) $x^2 + 4x - 21 = 0$

{3, −7}

$1 \cdot -21 = -21$

$-3 \cdot 7 = -21$

$-3 + 7 = 4$

$(x-3)(x+7)=0$

$x = 3 \quad x = -7$

$\{3, -7\}$

2) $x^2 + 13x + 40 = 0$

{−5, −8}

$a \cdot c = 40$

$5 \cdot 8 = 40$

$5 + 8 = 13$

$(x+5)(x+8)=0$

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

$\{-5, -8\}$

3) $2a^2 - 10a - 28 = 0$

{7, −2}

GCF = 2

$2(a^2 - 5a - 14) = 0$

$2(a-7)(a+2)=0$

$a \cdot c = -14$

$-7 \cdot 2 = -14$

$-7 + 2 = -5$

$a = 7 \quad a = -2$

$\{7, -2\}$

4) $8r^2 - 88r + 192 = 0$

{3, 8}

$8(r^2 - 11r + 24) = 0$

$8(r-3)(r-8) = 0$

$r = 3 \quad r = 8$

$1 \cdot 24 = 24$

$-3 \cdot -8 = 24$

$-3 + -8 = -11$

$\{3, 8\}$

5) $2n^2 + 11n = -5n - 30$

{−5, −3}

Must get set = 0

$2n^2 + 16n + 30 = 0$

$2(n^2 + 8n + 15) = 0$

$3 \cdot 5 = 15$

$3 + 5 = 8$

$2(n+3)(n+5)=0$

$n = -3 \quad n = -5$

$\{-3, -5\}$

6) $x^2 + 9x = 6x$

$-6x \quad -6x$

{−3, 0}

$x^2 + 3x = 0$

$x(x+3)=0$

$x = 0 \quad x = -3$

$\{-3, 0\}$