Algebra 1 Weds. 5-15-13 Class Notes

(103) $(b^3 + 3b^2) + (8b + 24)$

$b^2(b+3) + 8(b+3)$

$(b+3)(b^2+8)$

(111) $1x^2 + 8x + 7$ $\quad ax^2 + bx + c$

$a = +1$

sum $= b = 8$

prod $= ac = 7$

$+1 \cdot +7$

* ONLY if $a = +1$

SHORTCUT

$(x+1)(x+7)$

$(x^2 + 1x) + (7x + 7)$

$x(x+1) + 7(x+1)$

$(x+1)(x+7)$

(127) $4N^2 + 9N - 9$

sum = b = 9

prod = ac = −36

−3 +12

$(4N^2 - 3N) + (12N - 9)$

$N(4N-3) + 3(4N-3)$

$\boxed{(4N-3)(N+3)}$

(130) $-4m^2 - m + 5$

sum = b = -1

prod = ac = -20

$+4 \quad -5$

$(-4m^2 + 4m) + (-5m + 5)$

$-4m(m-1) + -5(m-1)$

$(m-1)(-4m-5)$

OR $(-4m^2 - 5m) + (4m + 5)$

$-m(4m+5) + 1(4m+5)$

$(-m+1)(4m+5)$

(141) $-16 = -10x^2 - 12x$

$10x^2 + 12x - 16 = 0$

$2(5x^2 + 6x - 8) = 0$

sum $= b = 6$

prod $= ac = -40$

$-4 \cdot +10$

$2[(5x^2 - 4x) + (10x - 8)] = 0$

$2[x(5x-4) + 2(5x-4)] = 0$

$2[(5x-4)(x+2)] = 0$

$x = \{-2, \frac{4}{5}\}$

CES