Algebra II

4-5

Factoring Polynomials

Nov 6-9:04 AM

Factoring Order -

1) Greatest Monomial Factor — $3x^2 - 6x$
   a) Stuff in Common — $3x(x-2)$
   b) Backwards Distributive Property
2) Difference of Squares
   a) Must have two groups, both perfect squares
   b) Must be a subtraction — $x^2 - 49$
   c) Answer will always be conjugate pairs. — $(x+7)(x-7)$
3) Backwards FOIL
   a) 3 groups
4) Grouping
   a) 4 or more groups
5) Sum and Difference of cubes

Nov 6-9:05 AM

Factor.

1) $16x^3 - 64x^2$

$16x^2(x - 4)$

$16x^2(x-4)$

Nov 6-9:06 AM

15) $st^2 - s$

$s(t^2-1)$

difference of squares

$s(t+1)(t-1)$

Nov 6-9:06 AM

23) $x(y-3)+2(3-y)$

negative trick

$x(y-3)-2(y-3)$

$(y-3)(x-2)$

Nov 6-9:07 AM

27) $ab-2-2b+a$

$(ab+a)+(-2-2b)$

$a(b+1)-2(1+b)$

$a(b+1)-2(b+1)$

$(b+1)(a-2)$

Nov 6-9:07 AM

29) $x^2 - 6x + 9 - 4y^2$ → odd duck

$(x^2-6x)+(9-4y^2)$

$\times (x-6)+(3+2y)(3-2y)$

$(9-6x)+(x^2-4y^2)$

$3(3-2x)+(x+2y)(x-2y)$

$(x^2-6x+9)-4y^2$

$(x-3)(x-3)-4y^2$

$(x-3)^2-4y^2$

$(x-3)^2-4y^2$

$[x-3+2y][x-3-2y]$

Nov 6-9:08 AM

pg 185

2-38 even

(skip 18, 20, 36)

Nov 6-9:08 AM