Factoring Review

Factoring a Polynomial

Common Factor

Binomial → **Difference of Squares**

Trinomial → **Simple**, **Complex**, **Perfect Square**

One variable

$81x^2-16$

$=(9x-4)(9x+4)$

$3z^2-48z+165$

$=3(z^2-16z+55)$

$-5\cdot-11=55$

$-5+-11=-16$

$=3(z-5)(z-11)$

$12p^2+17p-5$

$3p \cdot 5 = 20p$

$4p \cdot -1 = -3p$

$17p$

$=(3p+5)(4p-1)$

$4t^2-20t+25$

$2t\cdot-5=-10t$

$2t\cdot-5=-10t$

$-20t$

$=(2t-5)^2$

Two variables

$32x^4-162y^8$

$2(16x^4-81y^8)$

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

$=2(2x-3y^2)(2x+3y^2)(4x^2+9y^4)$

$x^2-10xy-39y^2$

$-13\cdot3=-39$

$-13+3=-10$

$=(x-13y)(x+3y)$

$12m^2+2mn-70n^2$

$=2(6m^2+mn-35n^2)$

$3m \cdot -7n = -14mn$

$2m \cdot 5n = 15mn$

mn

$=2(3m-7n)(2m+5n)$

$49r^2+84rs+36s^2$

$2\cdot\sqrt{49}\cdot\sqrt{36}$

$=2\cdot7\cdot6$

$=84$

$=(7r+6s)^2$

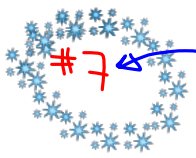
ex// factoring by grouping

$(2x^3+x^2)+(4x+2)$

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

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

Review Pg. 240 #1, 2, 5 - 8, 10, 11, (13-19)ace, not 18



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