

Test Notes

AAT

ch P.3 & P.4

Polynomials

- * standard form goes highest to lowest exponent
- * degree is the biggest exp
→ leading coefficient is the # attached

ex $-5x^2 + 3 - 4x + 10x^3$

SF: $10x^3 - 5x^2 - 4x + 3$, D: 3, LC: 10

Foiling

* a way to multiply binomials

First
O utside
I nside
L ast

ex $(x-5)(2x+1)$
 $= 2x^2 + x - 10x - 5$
 $= 2x^2 - 9x - 5$

ex2 $(x^2 - 3x + 1)(x - 2)$
 $x^3 - 2x^2 - 3x^2 + 6x + x - 2$
 $= x^3 - 5x^2 + 7x - 2$

GCF

* when they have something in common

ex $5x^3 - 15x$
 $5x(x^2 - 3)$

a=1

$x^2 - 8x + 15$

↑ add ↑ multiply

what 2 #s multiply to get 15 & add to get -8?

-5 & -3
 $(x-5)(x-3)$

ex1 $x^2 + 3x - 28$
 $= (x+7)(x-4)$

ex2 $x^2 - 64$ no middle so $b=0$
 $(x-8)(x+8)$

a ≠ 1

$3x^2 - 7x - 20$
 $3x^2 - 12x + 5x - 20$
 $3x(x-4) + 5(x-4)$
 $(3x+5)(x-4)$

① $a \cdot c = 3 \cdot -20 = -60$
 $b = -7$

- ② 2 #s multiply to -60 & add -7 → -12 & 5
- ③ replace b w/ answers
- ④ factor by grouping