

Survival Guide

Unit 4 – Polynomials

Name: _____

EVALUATE

1. $-2(x^2 - 2x + 2)$ if $x = -1$

GREATEST COMMON FACTORING - GCF

5. $3x^2 - 18x$

6. $-12x^3y^3 + 18x^2y^2 - 9xy$

MULTIPLY POLYNOMIALS

2. $(3x - 1)(x + 7)$

SIMPLE TRINOMIAL FACTORING – SUM & PRODUCT

7. $x^2 + 7x - 18$

8. $-2x^2 + 12x - 16$

9. $x^2 - x - 12$

3. $3(x + 4)(x - 2)$

4. $3(2x - 1)^2$

BINOMIAL FACTORING – DIFFERENCE OF SQUARES

10. $4x^2 - 25$

11. $2x^2 - 50$

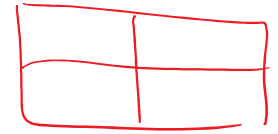
12. $49 - 9x^2$

1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144, 169, 196, 225, 256, ...

Expand - multiply
- remove brackets
F.O.I.L.

(ex) $2(x-3)(7x+1)$

OR $2(x-3)(7x+1)$
 $(2x-6)(7x+1)$



Factor - divide
- split up into brackets

Try G.C.F 1st
- divide by
common factor

(ex.) $10x^2 - 5x + 15$

(ex.) $-18x^2 + 24x$

2 terms
- even powers?
- one negative?
- # from above list?

IF NO
- check if can
do G.C.F
properly
OR
CAN'T DO more

IF YES
- do $\sqrt{\quad}$
- two brackets $(+)(-)$
(ex.) $1 - 16x^2$

3 terms
- has a # on x^2 term?

IF YES
- check if can
do G.C.F
properly
OR
CAN'T DO more

IF NO
- label Sum/Product
- split up Product #
- decide on negatives
- circle #'s for Sum
(ex.) $x^2 - 7x - 8$

(ex.) $x^2 - 11x + 18$