February 25th

Due Today: 8.3HW
Due Next Class: 8.4 HW

Unit 8: Factoring

Lesson 8.4: Two-Step Factoring

PLEASE GET OUT YOUR MASTERY REPORT SLIPS!

Answers to HW 8.3

1) $(x-4)(x+9)$
2) $(1+5x^3)(1-5x^3)$
3) Not factorable
4) $-x^3(3x^3+8x+6)$
5) $(x-11)(x+7)$
6) $(4n+1)(4n-1)$
7) $(m-10)(m-2)$
8) Not factorable
9) $(2x+1)(x-8)$
10) $(4m^3+5)(4m^3-5)$
11) $4k(2-10k-9k^2)$
12) $(3x-5)(x+10)$
13) $(7b-5)(b-4)$
14) unfactorable
15) $(5x+2)(5x-2)$
16) $10(-5-2p+6p^2+3p^4)$

② $1 - 25x^6$ $\sqrt{1} = 1$ $\sqrt{25x^6} = 5x^3$

$(1+5x^3)(1-5x^3)$

(8) $K^2 + 16$

unfactorable

④ $-3x^6 - 8x^4 - 6x^3$

gcf: $-x^3$

$-x^3(3x^3 + 8x + 6)$

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(16) $-50-20p+60p^2+30p^4$

gcf: 10

$10(-5-2p+6p^2+3p^4)$

$10(3p^4+6p^2-2p-5)$

(13) (7) $7b^2 - 33b + 20$

1) $7 \cdot 20 = 140$

2) $+33$, -5, -28, 140

-1	-140
-2	-70
3	x
4	
-10	-140

(3) -5 -28

$(7b-5)(7b-28)$

(4) $\frac{T}{7}$

$(7b-5)(b-4)$

5✓

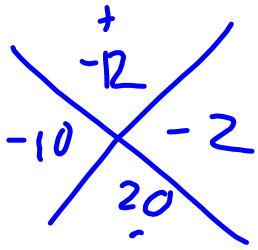
(9) $2x^2 - 15x - 8$

1) $A \cdot C = 2 \cdot -8 = -16$

2) $+ -15$, $-16 \cdot 1$, -16

1	-16
2	-8
4	-4

7) $m^2 - 12m + 20$



$(m-10)(m-2)$

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2-Step Factoring

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FACTOR:

$6k^2 + 42k + 36$

① gcf: 6

$6(K^2+7K+6)$

② diamond

+7, 1, 6, 6

$6(K+1)(K+6)$

$4x^8 - 25x^2$

① gcf: x^2

$x^2(4x^6-25)$

dots

$x^2(2x^3+5)(2x^3-5)$

2 Step factoring

① - gcf

② diamond dots ac

FACTOR:

$$x^8 - 16$$

$\sqrt{x^8} = x^4$

$\sqrt{16} = 4$

$(x^4 - 4)(x^4 + 4)$

dots

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

TWO STEP FACTORING:

- GCF FIRST, then Diamond, ACGC or Dots

- Double Dots

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Factor Practice:

1) $2r^2 + 12r + 16$

2) $125 - 45n^4$

3) $2x^3 - 12x^2 + 10x$

4) $14b^5 + 42b^3 - 35b$

5) $16x^4 - 1$

6) $20x^2 - 28x$

7) $12x^4 - 75x^2$

8) $2p^2 - 2$

9) $15n^5 + 24n^4 - 12n^3$

10) $50x^6 + 32$

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Common Mistakes

- dots w/ +
- forgetting the gcf
- not finding the right factors
- mixing up order
  - $(x^2+2)(x^2-3)$
  - not finishing ACGC

1) $2r^2 + 12r + 16$

2) $125 - 45n^4$

3) $2x^3 - 12x^2 + 10x$

4) $14b^5 + 42b^3 - 35b$

5) $16x^4 - 1$

6) $20x^2 - 28x$

7) $12x^4 - 75x^2$

8) $2p^2 - 2$

9) $15n^5 + 24n^4 - 12n^3$

10) $50x^6 + 32$

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Unit 8: FACTORING

Lesson #	Name	Recap	HW
8.1	Intro / Review of basic factoring		Feb. Break Videos + Packet
8.2	Review of Break assignment + Quiz		HW 8.2
8.3	Factoring Practice		HW 8.3
8.4	Two-Step Factoring		HW 8.4 skip mit 7 Retakes

Aug 8-7:55 PM