

Correct Last Day's Homework: Graphs a-l

Today's Learning Target(s):



"I can:

- a) factor more difficult polynomials, including special cases.
- b) remember to always look for **common factors first**."

Cycle 3 Day 3

MBF 3CI CHAPTERS 4, 5, 7: RELATIONS

Factoring Trinomials $x^2 + bx + c$ (Special Case when $b=0$)

Special Case "The Background"

Date: Nov. 20/17

Expand the following:

a) $(x-3)(x+3)$

FOIL
 $= x^2 + 3x - 3x - 9$
 $= x^2 - 9$

b) $(x+8)(x-8)$

$$= x^2 - 8x + 8x - 64$$

$$= x^2 - 64$$

Ex.1 Factor the following:

Method 1 (when $b=0$)

a) $x^2 - 49$

$$= x^2 + 0x - 49$$

$$= (x+7)(x-7)$$

b) $y^2 - 100$

$$= y^2 + 0y - 100$$

$$= (y-10)(y+10)$$

Method 2

c) $x^2 - 36$

$$= (x-6)(x+6)$$

d) $x^2 - 81$

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

This type of factoring is called a "Difference of Squares"

MBF 3CI Factoring Trinomials of the form $ax^2 + bx + c$ (when $a \neq 0$, and $a \neq 1$)

Today we are combining the types of factoring.

Remember: Always **look for common factoring first**

Ex.2 Factor the following completely.

a) $2x^2 + 18x + 40$

$$= 2(x^2 + 9x + 20)$$

$$= 2(x + 5)(x + 4)$$

b) $3x^2 - 12$

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

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

c) $3x^2 - 39x + 90$

$$= 3(x^2 - 13x + 30)$$

$$= 3(x - 10)(x - 3)$$

d) $-2x^2 + 50$

$$= -2(x^2 - 25)$$

$$= -2(x - 5)(x + 5)$$

e) $-x^2 + 18x + 40$

$$= -1(x^2 - 18x - 40)$$

$$= -1(x - 20)(x + 2)$$

f) $9.3y^2 - 46.5y$

$$= 9.3y(y - 5)$$

g) $-2x^2 + 16x - 30$

$$= -2(x^2 - 8x + 15)$$

$$= -2(x - 3)(x - 5)$$

h) $1.3x^2 + 3.9x - 5.2$

$$= 1.3(x^2 + 3x - 4)$$

$$= 1.3(x - 1)(x + 4)$$

i) $S.A._{Cylinder} = 2\pi r^2 + 2\pi r h$

$$= 2\pi r(r + h)$$

There are 4 "Exit Card" questions today. **Complete them first.**

Exit Cards!

Each student must submit **p.254 #7c AND p.259 #1c, 2c and 5c** before they leave.

Entertainment: Do not "expand to check" – just use the back of the book to check.

p. 254 #7

pp. 259-263 #1ace, 2ace, 3a, 4ace, 5ace, 6