

Correct from last day: pp. 93-94 # 2, 3, 5, 6, 7a, 8, 15

p. 93

$$6f) x(3x-2) + (3x-2)(x+1)$$

$$= (3x-2)(x + (x+1))$$

$$= (3x-2)(2x+1)$$

7a) $9x \boxed{A = 18x^2 - 9x}$ $A = lw$
 $18x^2 - 9x$
 $= 9x(2x - 1)$

$h = 10$
 8. $SA = 2\pi r^2 + 2\pi r h$
 $= 2\pi r^2 + 2\pi r(10)$
 $= 2\pi r(r + 10)$

Factoring Warm-up: *This part is not on the handout.*

a) List all the factors of 12

(This means list all the numbers that divide into 12 with no remainder)

1, 2, 4, 3, 6, 12

1	12
2	6
3	4

b) List all the factors of 20

1	20
2	10
3	
4	5

c) List all the factors of 30

1	30
2	15
3	10
4	
5	6

Today's Learning Goal(s):

Date: Feb. 22/19
(Every lesson)

By the end of the class, I will be able to:

- a) factor simple trinomials of the form $x^2 + bx + c$

MCF 3MI

2.3 Factoring Quadratic Expressions

Recall: Factoring expresses a polynomial as a **product** of polynomials.

$$(x+2)(x+3) \overset{\text{Expanding}}{=} x^2 + 5x + 6 \overset{\text{Factoring}}{=}$$

Whenever you are faced with a factoring question, **ALWAYS** try to **Common Factor FIRST!**

Ex.1 Factor the following trinomials.

a) $x^2 + 8x + 15$ $\begin{matrix} P = 15 \\ S = 8 \end{matrix}$

$$= x^2 + 3x + 5x + 15$$

$$= x(x+3) + 5(x+3)$$

$$= (x+3)(x+5)$$

b) $x^2 + 7x + 12$

$$= x^2 + 3x + 4x + 12$$

$$= x(x+3) + 4(x+3)$$

$$= (x+3)(x+4)$$

c) $x^2 - 7x + 12$

$$= x^2 - 4x - 3x + 12$$

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

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

d) $x^2 + 6x - 16$ $\begin{matrix} -1 + 6 \\ -2 + 8 \\ -4 + 4 \end{matrix}$

$$= x^2 - 2x + 8x - 16$$

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

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

e) $x^2 - 3x - 10$

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

f) $x^2 - 7xy + 12y^2$

$$= x^2 - 3xy - 4xy + 12y^2$$

$$= x(x-3y) - 4y(x-3y)$$

$$= (x-3y)(x-4y)$$

g₁) $3x^2 + 3x - 6$ $\begin{matrix} P = -18 \\ S = 3 \end{matrix}$

$$= 3x^2 - 3x + 6x - 6$$

$$= 3x(x-1) + 6(x-1)$$

$$= (x-1)(3x+6)$$

$$= (x-1)(3)(x+2)$$

$$= 3(x-1)(x+2)$$

g₂) $3x^2 + 3x - 6$

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

$$= 3(x+2)(x-1)$$

h) $x^2 + 4x + 7$

↳ DNF
(Does Not Factor)

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

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

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

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

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

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

Let's Practice with Knowledge Hook!

If asked, set up a student account.

If you forgot your password, I can simply reset it.

How to Join

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