

Correct from last day: pp.85-87 #2, 3, 5 - 7, 14⁶


p.87 14. Expand and simplify.

a) $(2x - y)(3x + y)$

b) $(3a - 5b)^2$

c) $(5m - 7n)(5m + 7n)$

d) $-2(x + 3y)(2x - y)$


$$\begin{aligned} &= (3a - 5b)(3a - 5b) \\ &= 9a^2 - 30ab + 25b^2 \end{aligned}$$

Today's Learning Goal(s):

Date: Feb. 21/19
(Every lesson)

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

- a) factor out the GCF from an algebraic expression .

MCF 3MI

2.2 Factoring Polynomials: Common Factoring

Factoring: Expressing a polynomial as a **product** of polynomials.

$$3x(x-7) = 3x^2 - 21x$$

Expanding (blue arrow pointing right)
Factoring (red arrow pointing left)

Whenever you are faced with a factoring question,

ALWAYS try to Common Factor FIRST!You are looking for a number or term that can **divide evenly into ALL of the terms** in the expression.

Ex.1 Factor, using the greatest common factor.

$$\begin{array}{lll} \text{a) } 4x^3 - 6x^2 & \text{b) } 6x^2 - 4x + 8 & \text{c) } 10a^2b^3 + 20a^3b - 5ab^3 \\ = 2x^2(2x-3) & = 2(3x^2 - 2x + 4) & = 5ab(2ab^2 + 4a^2 - b^2) \end{array}$$

$$\begin{array}{lll} \text{d) } 2xy - 5y & \text{e) } 2xz^3 - 5z^3 & \text{f) } 2x(x-3) - 5(x-3) \\ = y(2x-5) & = z^3(2x-5) & = (x-3)(2x-5) \end{array}$$

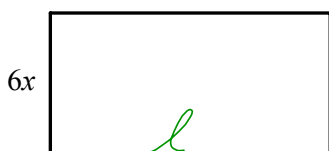
$$\begin{array}{ll} \text{g) } 4y(y-2) + (3y+4)(y-2) & \text{h) } -12x^2 - 14x \\ = (y-2)(4y+3y+4) & = -2x(6x+7) \\ = (y-2)(7y+4) & \end{array}$$

$$\begin{array}{l} \text{**opposites } -x+3 \\ = -1(x-3) \end{array} \left\{ \begin{array}{l} 4-y \\ = -1(-4+y) \\ = -1(y-4) \end{array} \right.$$

$$\begin{array}{ll} \text{i) } 3x(x-4) + 2(4-x) & \text{j) } 7x(2x-5) - 3(5-2x) \\ = 3x(x-4) + 2(-1(-4+x)) & = 7x(2x-5) + 3(2x-5) \\ = 3x(x-4) - 2(x-4) & = (2x-5)(7x+3) \\ = (x-4)(3x-2) & \end{array}$$

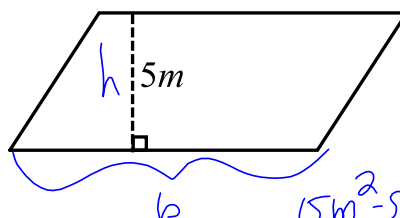
Ex. 2 The area, A , of each figure is given.
Determine the unknown measurement.

a) $A = 18x^2 - 12x$ $A = lw$



$$18x^2 - 12x = 6x(3x - 2)$$

b) $A = 15m^2 - 5m + 10$



$$A = bh$$

$$15m^2 - 5m + 10 = 5m\left(3m - 1 + \frac{2}{m}\right)$$

Practice: pp. 93-94 #2, 3, 5, 6, 7a, 8, 15

Be sure to keep up with your homework....SWYK is coming Monday!