

1-1 Factoring with a GCF

- Objectives:** 1-1a: I can identify a GCF
 1-1b: I can factor out a GCF from an expression

Factor: GCF

12 : 1, 2, 3, 4, 6, 12

9 : 1, 2, 4, 8

x^3y : (x, x, x, y)

x^2y^2 : (x, x, y, y)

(2
x y)

Nov 7-12:49 PM

Aug 22-9:56 AM

To factor an expression containing two or more terms, factor out the *greatest common factor* (GCF)

Terms: Expressions separated by addition or subtraction

GCF: ^{The biggest} A value, variable, or both that terms have in common

Factor each quadratic expression.

a. $5x^2 + 4x$

GCF: x

$x(5x + 4)$

b. $3ax^2 - 6a^2x$

$3ax(x - 2a)$

Factor out the GCF for the following

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

$4xy^2(1 + 3xy)$

$3x^2 - 9x + 27$

$3(x^2 - 3x + 9)$

$5x^2 - 25x$

$5x(x - 5)$

$7a^2b + 5ab^2$

$ab(7a + 5b)$

Nov 7-1:00 PM

Jan 4-10:47 PM

Identify the terms and GCF of each term

$$\overset{1 \text{ term}}{\circlearrowleft} 2y(y+5) + \overset{1 \text{ term}}{\circlearrowleft} 3(y+5)$$

Terms: 2

GCF: $(y+5)$

Jan 4-10:48 PM

Binomial Factors

Factor out each common binomial factor.

$$4x(x+1) - 3(x+1)$$

$$(x+1)(4x-3)$$

$$2t(3t-7) + 5(3t-7)$$

$$(3t-7)(2t+5)$$

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Factor the following

$$2a(a-1) - 3(a-1)$$

$$x(x+7) - 5(x+7)$$

$$4x(x+3) - 5(x+3)$$

Jun 18-11:44 AM