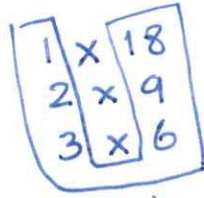


Algebra 1: 7.4 FACTORING POLYNOMIALS

Warm Up:

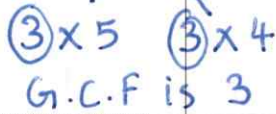
Find Factors of 18



1, 2, 3, 6, 9, 18 are factors of 18

Find Greatest Common Factor (GCF).

a. 15, 12



b. 7, 9

PRIME

Factors:

Numbers that are multiplied together are called Factors.

$3 \times 5 = 15$
Factors

GCF:

The Largest factor that two or more numbers have in common.

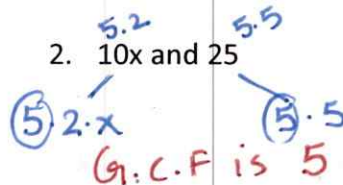
$6 \times 3 = 18$ $6 \times 5 = 30$
6 is GCF of 18 & 30

Find GCF of monomials

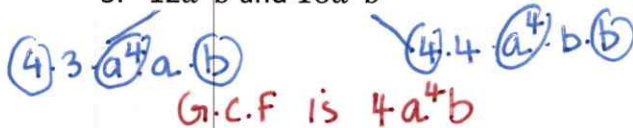
1. $3x, 3x^2$



2. $10x$ and 25



3. $12a^5b$ and $16a^4b^2$



4. 25 and $18m^2$

PRIME

*Think of factoring as opposite of distribution.

Distribution

$x(x+2) \rightarrow x^2 + 2x$

Factoring

$x^2 + 2x \rightarrow x(x+2)$

Factor out GCF from each polynomial and check

1. $2x^2 + 6x$

$2x(x+3)$

check:

$2x^2 + 6x$

2. $3x^2 + 9x$

$3x(x+3)$

check:

$3x^2 + 9x$

Algebra 1: 7.4 FACTORING POLYNOMIALS

$$3. \quad 12x^5 + 8x^4 - 6x^3$$

$$2x^3(6x^2 + 4x - 3)$$

check

$$12x^5 + 8x^4 - 6x^3$$

$$5. \quad 100a^7b^5 - 150a^8b^3$$

$$50a^7b^3(2b^2 - 3a)$$

$$\text{Check: } 100a^7b^5 - 150a^8b^3$$

Try it....Factor out GCF and check your answer

$$1. \quad x^{10} + x^9 - x^8$$

$$x^8(x^2 + x - 1)$$

check:

$$x^{10} + x^9 - x^8$$

HW. 7.4 Pg 285 #26-37

$$4. \quad 10a^2b + 12ab^2$$

$$2ab(5a + 6b)$$

check

$$10a^2b + 12ab^2$$

$$2. \quad 24x^3y^2 - 30x^2y^3 + 12x^2y^4$$

$$6x^2y^2(4x - 5y + 2y^2)$$

check:

$$24x^3y^2 - 30x^2y^3 + 12x^2y^4$$