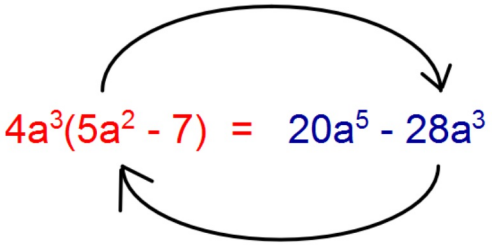
Expanding

(multiplying, Distributive Prop, removing parentheses)



$4a^3(5a^2 - 7) = 20a^5 - 28a^3$

Factoring

(Division, putting parentheses back into the problem, taking out the GCF)

Find the GCF of each polynomial

$32m^4 + 8m^2$

$GCF = 8m^2$

$63g^5 - 36g$

$GCF = 9g$

Find the GCF of each polynomial

$18m^5n^3 + 24m^4n^9$ $6m^4n^3$

$48a^7b^4c^3 + 32a^3c^6 - 80a^6b^{10}c^2$ $16a^3c^2$

Expand:

$6m^2(4m^5 + 3m) =$ $24m^7 + 18m^3$

Factor:

$10a^4 - 15a^3 = \underbrace{5a^3}_{GCF}(2a - 3)$

Factor each polynomial using the GCF

$\frac{72m^9}{24m^4} - \frac{48m^4}{24m^4}$ $24m^4(3m^5 - 2)$

GCF

Factor.

$\frac{27E^7}{9E^4} + \frac{9E^4}{9E^4} =$ $9E^4(3E^3 + 1)$

GCF

Factor.

$12R^5 - 16R^3 + 8R^2 =$ $4R^2(3R^3 - 4R + 2)$

GCF

Factor.

$45w^6x^3 + 27w^4x^5 - 36w^2x^7 =$ $9w^2x^3(5w^4 + 3w^2x^2 - 4x^4)$

GCF

Factor.

$$36p^6q^3r^7 - 54pq^8r^3 + 90p^5q^4r^2$$

$18pq^3r^2(2p^5r^5 - 3q^5r^1 + 5p^4q^1)$

GCF

You can now do Hwk #13

Sec 9-2

Pages 463-464

Problems 2, 8, 9, 19, 20, 22-24, 38

Sec 9-3 Multiplying Binomials

Expand

$(e + 3)(e + 7)$

FOIL Method

$(e + 3)(e + 7)$

$\underset{\text{F}}{e \cdot e} + \underset{\text{O}}{e \cdot 7} + \underset{\text{I}}{3 \cdot e} + \underset{\text{L}}{3 \cdot 7}$

mult first in each

mult outer 2 terms

mult inner 2 terms

mult last in each

$e^2 + 7e + 3e + 21 = e^2 + 10e + 21$

Distributive Property

$(e + 3)(e + 7)$

$e^2 + 7e + 3e + 21$

$= e^2 + 10e + 21$

The Box Method

$(e + 3)(e + 7)$

	e	$+3$
e	e^2	$+3e$
$+7$	$+7e$	$+21$

$e^2 + 10e + 21$