Math 10

Section 5.2.1

Common Factors

Focus:

1. To be able to determine prime factors, greatest common factors and least common multiples of whole numbers.
2. To be able to write polynomials in factored form.

Curricular Competencies:

A2: I can explore, analyze and apply mathematical ideas

Terminology

The opposite of the distributive property is factoring (multiplying). Factoring converts polynomials into their component factors. This is often important for doing more complex mathematical operations.

To factor something means to express as a product.

When factoring a polynomial, always look for the greatest common factor (GCF) first.

GCF

List the Greatest Common Factors …

$16x^2y$ and $24x^2y^3$ → $8x^2y$

$5m^2n$ and $15mn^2$ → $5mn$

$48ab^3c$ and $36a^2b^2c^2$ → $12ab^2c$

GCF and Polynomials

We can do this for polynomials as well:

To do this, find GCF
divide GCF from all terms

$\frac{n}{n}$ $n^0 = 1$

Write each in factored form.

$10y - 20$ $10(y-2)$ check $10y-20$	$35a + 10a^2$ $5a(7+2a)$	$24m^2n + 16mn^2$ $8mn(3m+2n)$
$-28x^2y - 35xy^2$ $-7xy(4x+5y)$	$3x^2 + 12x - 6$ $3(x^2+4x-2)$	$x^5 - x^4$ $x^4(x-1)$

assignment: p 220 2ac, 4-6, 10, 11