TOPIC 2: FUNCTIONS AND ALGEBRA

SO1: Work with algebraic expressions using the remainder and factor theorems

* Find the remainder

Short notes on polynomials:

A POLYNOMIAL is an algebraic expression that contains two or more terms.

e.g. (i) $x+1$ (binomial), polynomial of degree 1.

(ii) x^2+x+1 (trinomial), polynomial of degree 2

It's a polynomial of degree 2 because its highest power is 2.

(iii) x^3+x^2+x+1 (cubic expression), polynomial of degree 3.

TODAY'S LESSON:

Use Long Division to divide two polynomials.

example 1:

Find the quotient if the polynomial x^3+2x^2+3x-6 is divided by $x-1$

$$x-1 \;\overline{)\; x^3+2x^2+3x-6}$$

x^2+3x+6 ← quotient

$x-1$ ↗ Divisor

x^3+2x^2+3x-6 ↑ Dividend

Step 1: Divide the first term of the dividend by the first term of the divisor. The answer x^2 must be written above x^3