

# Factor theorem and polynomial division

Aim: Solve certain types of quadratic equation

$$ax^2 + bx + c = 0.$$

Let  $n \geq 0$  be an integer. A polynomial in a variable  $x$  is an expression of the form

$$p(x) = a_n x^n + a_{n-1} x^{n-1} + \dots + a_1 x + a_0,$$

If  $a_n \neq 0$  then we say that the degree of  $p(x)$  is  $n$ .

We denote this by  $\deg(p) = n$ .