Rational Function Proper Form

The ratio of Polynomials, P(x)/Q(x) is rational Function

where $P(X) = a_n X^n + a_{n-1} X^{n-1} + \ldots a_0$

$= a_n(X - b_1)(X - b_2)(X - b_3)\ldots.(X - b_n)$

$Q(X) = a_m X^m + a_{m-1} X^{m-1} + \ldots a_0$

$= a_m(X - c_1)(X - c_2)(X - c_3)\ldots.(X - c_m)$

$$F(x) = \frac{P(x)}{Q(x)}$$

F(x) is proper form when n < m

$F(x) = F_{proper}(x) + D(x)$

F(x) can be changed to proper form plus D(x), a polynomial function