

Split the Polynomials

$$1) \frac{1}{(x+a)(x+b)} = \frac{A}{x+a} + \frac{B}{x+b}$$

$$2) \frac{1}{(x+a)(x+b)(x+c)} = \frac{A}{x+a} + \frac{B}{x+b} + \frac{C}{x+c}$$

$$3) \frac{1}{(x+a)(x+b)^2} = \frac{A}{x+a} + \frac{B}{x+b} + \frac{C}{(x+b)^2}$$

$$4) \frac{1}{(x+a)(x^2+bx+c)} = \frac{A}{x+a} + \frac{Bx+C}{x^2+bx+c}$$

$$5) \frac{1}{(x^2+ax+b)(x^2+cx+d)} = \frac{Ax+B}{x^2+ax+b} + \frac{Cx+D}{x^2+cx+d}$$

$$6) \frac{1}{(x+a)(x^2+bx+c)^2} = \frac{A}{x+a} + \frac{Bx+C}{x^2+bx+c} + \frac{Dx+E}{(x^2+bx+c)^2}$$

$$7) \frac{1}{(x+a)^2(x^2+bx+c)^2} = \frac{A}{x+a} + \frac{B}{(x+a)^2} + \frac{Cx+D}{x^2+bx+c} + \frac{Ex+F}{(x^2+bx+c)^2}$$

