

$$\frac{6x^2 + 5x + 15}{x^2 + 7} = \frac{6x^2 + 5x + 15}{(x+3)(x^2 - 3x + 9)}$$

$$\frac{A}{x+3} + \frac{(Bx+C)(x^2 - 3x + 9)}{x^2 - 3x + 9}$$

CROSS MULTIPLY

~~$$A(x^2 - 3x + 9) + (Bx + C)(x + 3)$$~~

$$A(x^2 - 3x + 9) + (Bx^2 + 3Bx) + (3C + 3Cx)$$

$$A(x^2 - 3x + 9) + B(x^2 + 3x) + C(x + 3)$$

	A	B	C	DN
x^2	1	1	0	6
x	-3	3	1	5
C	9	0	3	15