

משפט

$$a_0 \neq 0, \dots, a_n \neq 0$$

$$a_n x^n + a_{n-1} x^{n-1} + \dots + a_1 x + a_0 = 0$$

$$x = \frac{p}{q}$$

$$a_n \left(\frac{p}{q}\right)^n + a_{n-1} \left(\frac{p}{q}\right)^{n-1} + \dots + a_1 \left(\frac{p}{q}\right) + a_0 = 0 \dots (1)$$

$$(1) \cdot q^{n-1}$$

$$a_{n-1} p^{n-1} + a_{n-2} p^{n-2} q + \dots + a_0 q^{n-1} = -\frac{a_n p^n}{q}$$

$$(1) \cdot \frac{q^n}{p}$$

$$a_n p^{n-1} + a_{n-1} p^{n-2} q + \dots + a_1 q^{n-1} = -\frac{a_0 q^n}{p}$$