

$$\frac{-\Delta}{f_a} = \frac{f_{ac} - b^2}{f_a}$$

$$\frac{-12 - b^2}{-4} = 7$$

$$-12 - b^2 = -28$$

$$b^2 = 16$$

$$b = \pm 4$$

الف: $x^2 = +$ $+^2 + 2 + +^2$ $\Delta < 0$ ریشه ندارد

ب: $5 - x^2 = +$ $+^2 - 2 + -1 \omega = 0$ $(+ - \omega)(+ + \omega) = 0$ $+ \begin{cases} \omega \\ -\omega \end{cases}$

$$5 - x^2 = \omega \quad x^2 = -1 \quad \times$$

$$5 - x^2 = -\omega \quad x^2 = 6 \quad x = \sqrt{6} \\ x = -\sqrt{6}$$

$$x_1 = \alpha$$

$$x_2 = \alpha + 2$$

$$x_1 + x_2 = \alpha + \alpha + 2 = 2\alpha + 2 = 5 \quad 2\alpha = 3 \quad \alpha = 1$$

$$x_1 = 1$$

$$x_2 = 3 \quad x_1 x_2 = 1 \times 3 = 3 \quad \frac{m}{-4} = 3 \quad \boxed{m = -12}$$

$$\alpha + B = 2$$

$$2\alpha - B = 5$$

$$3\alpha = 7$$

$$\alpha = 2$$

$$5 - B = 5$$

$$B = 0$$

$$\alpha B = 2 \times 0 = 0$$

$$\frac{m-1}{3} = 0$$

$$m-1 = 0$$

$$m = 1$$

$$x_1 = \alpha$$

$$x_2 = \frac{1}{\alpha}$$

$$x_1 x_2 = \alpha \times \frac{1}{\alpha} = 1$$

$$\frac{m^2 - 2}{-m} = 1$$

$$m^2 + m - 2 = 0$$

$$(m+2)(m-1) = 0$$

$$m = -2$$

$$m = 1$$

$$\alpha B = \mu$$

$$\alpha B^r = \mu$$

$$B = \frac{\mu}{\alpha}$$

$$\frac{F\alpha}{\mu} = \mu$$

$$q = F\alpha$$

$$\alpha = \frac{q}{F}$$

$$\alpha + B = \frac{\mu}{\alpha} + \frac{q}{\mu} = \frac{\mu^2 + q\mu}{\mu^2} = \frac{F\mu}{\mu^2}$$

$$\frac{m}{1} = \frac{F\mu}{\mu^2}$$

$$m = \frac{F\mu}{\mu^2}$$

$$n_1 = \alpha$$

$$n_r = \mu\alpha$$

$$\alpha + \mu\alpha = \mu$$

$$\alpha = 1$$

$$n_1 n_r = 1 \times \mu$$

$$m = \mu$$

$$n_1 = 1$$

$$n_r = \mu$$

$$\alpha^r + \frac{\Delta}{\alpha^r} = \left(\alpha + \frac{\mu}{\alpha} \right) \left(\alpha^r + \frac{\mu}{\alpha^r} - \mu \right)$$

$$\alpha^r + \frac{\mu}{\alpha^r} = \frac{\alpha^r + \mu}{\alpha^r} = \frac{(\alpha^r + \mu)^r - F\alpha^r}{\alpha^r}$$

$$\alpha^r - \mu\alpha + \mu = 0$$

$$\frac{\alpha^r + \mu}{\alpha} = \frac{\mu\alpha}{\alpha} = \mu$$

$$\frac{Fq\alpha^r - F\alpha^r}{\alpha^r} = \frac{F\Delta\alpha^r}{\alpha^r} = F\Delta$$

$$\alpha^r + \mu = \mu\alpha$$

$$\mu \times F\mu = \mu^2$$

$$\frac{-\Delta}{F\alpha} = \frac{F\alpha - b^r}{F\alpha} = \frac{-F\omega_{00}}{-F_0} = g F_0 \omega$$

$$-10 + \mu + \omega_0 t = 0$$

$$10 + (\omega - t) = 0$$

$$t = 0 \quad x$$

$$t = \omega \quad \checkmark$$

الف:

