

$$\frac{-1}{2a-2} = 2$$

$$2a-2 = -1$$

$$a = \frac{3}{2} \checkmark$$

$$-\frac{1}{\varepsilon} x^2 + x + 3$$

$$\frac{-1 \pm \sqrt{1+3}}{-\frac{1}{2}} = 4 \checkmark$$

$$-m > 0$$

$$m < 0$$

$$2\Delta + \varepsilon m^2 > 0$$

$$-2\Delta > \varepsilon m^2$$

$$-2 > 2m$$

$$-1 > m$$

~~$$-2 > m$$~~

$$-2,0 < m < 0 \checkmark$$

$$x^2 + 5x + p$$

$$x^2 + 2x + \frac{4}{9}$$

$$9x^2 - 18x + 8 \checkmark$$

$$a^2 + b^2 + 2c = 12$$

$$x^2 - m - 2 + 18 - m - 2 = 12$$

$$-2m + 18 = 12$$

$$9 - \Delta = \varepsilon \Rightarrow (2-0)^2 \Rightarrow -x^2 + b x + c$$

$$-2 + 2b + \Delta = 9$$

$$b = 6$$

$$-x^2 + \varepsilon x + \Delta = -(x+1)(x-8)$$

$$= \frac{1}{-1} \frac{\Delta}{+1} =$$

$$\frac{9\beta}{\alpha} = \alpha\beta$$

عقودون β ميني

$$-3 + \beta = -\frac{1}{\beta} \Rightarrow \beta = \frac{1}{\beta}$$

$$-3\alpha^2 - 1\alpha + 9\beta$$

$$\frac{1}{\beta} + (-\frac{1}{\beta}) = \frac{1}{\beta} \checkmark$$

(2)

6

$$\alpha^2 = -m\alpha + 2m$$

$$-m\alpha - m\beta + 2m = 1$$

$$-m(\frac{m}{-1}) + 2m = 1$$

$$m^2 + 2m - 1 = 0 \quad (m+2)(m-1) = 0 \quad m = \begin{cases} -2 \\ 1 \end{cases} \checkmark$$

$$2\alpha^2 + m\alpha - 2m$$

$$2\alpha^2 + 2\alpha - 2 \checkmark \rightarrow S = -\frac{b}{a} = (-2)$$

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

(1, 1, 1)

7

$$-\frac{\Delta}{\epsilon a} = 1$$

$$\frac{-14 + 2m^2 + 2\lambda m}{\epsilon m}$$

$$2m^2 - 14m - 14 = 0$$

$$m^2 - 7m - 7 = 0 \Rightarrow (m-7)(m+1) = 0 \quad m = \begin{cases} 7 \\ -1 \end{cases}$$

$$-2\alpha^2 + 2\alpha + 4$$

$$+2\alpha + 2\alpha - 2 = 0 \quad \alpha = 2, -1$$

$$K = 2 \checkmark$$

(2)

8

$$9 - \epsilon = \frac{1}{\beta} (1 - 0) \Rightarrow -\frac{b}{\beta} + b\alpha + \epsilon$$

$$-\frac{1}{\beta}\alpha^2 + b\alpha + \epsilon$$

$$-\frac{1}{\beta}(1^2) + b + \epsilon = 4$$

$$b = 2$$

$$+ \alpha^2 - \epsilon\alpha - 1 = 0 \quad \text{وقت!}$$

$$\frac{1}{\alpha} + \frac{1}{\beta} = \frac{-b}{\alpha\beta} = \frac{-2}{-1} = 2$$

(1, 1, 1)

9

$$f - 1a - 1 + 3a^2 + 4a + 3 = 0$$

$$3a^2 - 2a - 1 = 0$$

$$(a-1)(3a+1) = 0$$

$$a = 1 \quad \text{وقت!}$$

$$a = -\frac{1}{3} \rightarrow 3a^2 - 1a + 1 = 0 \quad \begin{cases} a = 1 \\ a = -\frac{1}{3} \end{cases}$$

$$3a^2 - 1a + 1 = 0 \quad a = 2, 1 \checkmark$$

(1, 1, 1)

10

$$r\alpha^r + \alpha^r + r\beta^r - \beta^r = 12 \rightarrow r(\alpha^r + \beta^r) + \alpha^r - \beta^r = 12$$

(f)

$$\xrightarrow[\alpha - \beta > 0]{\beta > \alpha} r(S^r - r\rho) + (S)\left(\frac{-\sqrt{\Delta}}{|a|}\right) = 12$$

$$\xrightarrow[\rho = \frac{m+r}{r}]{S = r} r(14 - m - r) - r\left(\frac{\sqrt{r\lambda - \lambda m}}{r}\right) = r\lambda - rm - \sqrt{r\lambda - \lambda m} = 12$$

$$14 - rm = \sqrt{r\lambda - \lambda m} \rightarrow \boxed{m = r}$$