

$$\begin{cases} \alpha^2 - 5\alpha + 2 = 0 \\ \beta^2 - 5\beta + 2 = 0 \end{cases}$$

$$\alpha + \beta = 5, \alpha\beta = 2$$

$$\frac{\alpha^2 + \beta^2}{\alpha\beta} = \frac{\alpha^2 + \beta^2 + 2\alpha\beta - 2\alpha\beta}{(\alpha + \beta)\beta} = \frac{(\alpha + \beta)^2 - 2\alpha\beta}{\alpha + \beta} = \frac{5^2 - 2 \times 2}{5} = \frac{25 - 4}{5} = \frac{21}{5}$$

$$\begin{vmatrix} -1 & 5 \\ -2 & -5 \end{vmatrix} \rightarrow \begin{vmatrix} 1 & -5 \\ 2 & 5 \end{vmatrix}$$

$$\frac{1+1}{2} = 1, 2 \rightarrow 1-2, 2 = -1, 2 = \frac{1}{2}$$

$$\text{ext: } \begin{cases} x = -\frac{b}{2a} = \frac{1}{2} \\ y = \frac{4ac - b^2}{4a} = \frac{4 \times 1 \times 2 - 1}{4} = \frac{7}{4} \end{cases} \rightarrow \text{مجموع ضرایب} = \frac{-b}{a} = \frac{1}{2} \times 2 = \frac{1}{2}$$

$$\frac{\sqrt{a}}{|a|} = \frac{1}{2} \rightarrow \frac{\sqrt{1 \times 2 - 1}}{1} = \frac{1}{2} \rightarrow \sqrt{2-1} = \frac{1}{2} \rightarrow \sqrt{1} = \frac{1}{2}$$

$$2-1 = \frac{1}{2} \rightarrow \frac{2}{2} = 1 \rightarrow 2-1 = 1 \Rightarrow \left[\frac{1}{2} \right] = 1$$

$$\frac{1+1}{2} = 1 \rightarrow 1-2 = (-1) \rightarrow \frac{-b}{2a} = (-1) \rightarrow b = 2a$$

$$\alpha + \beta$$

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

$$\alpha\beta = \frac{c}{a} = \frac{-1}{2} \rightarrow -\alpha = 2c \rightarrow \frac{x(-1)}{y=1} \rightarrow a-b+c=1 \rightarrow c-a=1 \rightarrow 2c=1 \rightarrow c = \frac{1}{2}$$

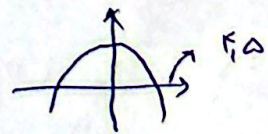
$$-x^2 + 5x + m = 0$$

$$\textcircled{1} \quad a > 0 \rightarrow 25 + 4m \geq 0 \rightarrow m \geq -\frac{25}{4}$$

$$\textcircled{2} \quad -\frac{1}{2} + \frac{25}{2} + m < 0 \rightarrow 12 + m < 0 \rightarrow m < -12$$

$$\textcircled{3} \quad \frac{-b}{2a} < \frac{1}{2} \rightarrow \frac{-1}{2} = -\frac{1}{2} \checkmark$$

$$\Rightarrow -\frac{25}{4} \leq m < -12 \Rightarrow \{-12, -\frac{25}{4}, -12, -\frac{25}{4}\}$$



12.5

12.5

12.5

12.5

12.5

12.5

12.5

12.5

$$\frac{-\Delta}{f_a} = r \leadsto \frac{-(1\epsilon\epsilon - \epsilon m(am-1))}{f_m} = r$$

$$r_0 m r - 1 r m = 1\epsilon\epsilon = 0 \leadsto am^r - r^m - r^y = 0$$

$$\Delta = 9 + \sqrt{r_0} = \sqrt{r_0} \leadsto \frac{r \pm r_0}{1.0} = r, -r, r \quad \checkmark \quad (\text{ممكن مقادير } m > 0)$$

$$a = \frac{-b}{r_a} = \frac{1r}{9} = \boxed{r}$$

$$\alpha, \alpha, \beta \rightarrow a = \sqrt{\alpha\beta} = \sqrt{r_a - 1}$$

$$a^r = r_a - 1 \leadsto a - r_a + 1 = 0 \leadsto a = 1$$

$$x^r - vx^r - a = 0 \quad \underline{x^r = r} \quad t^r - vt - a = 0$$

$$t = \frac{v \pm \sqrt{49}}{r} = x^r \leadsto x^r = \frac{v + \sqrt{49}}{r} \leadsto x = \frac{\pm \sqrt{v + \sqrt{49}}}{r}$$

$$s = 0, \quad p = \frac{v + \sqrt{49}}{-r} \Rightarrow r p^r - r s p + r s = r p^r = 59 + \sqrt{49}$$

$$\text{ext} \left| \begin{array}{l} \frac{-b}{r_a} = \frac{r}{K} \\ \frac{r}{K} - \frac{1}{K} - y \\ -\frac{r}{K} - y = \boxed{-1} \end{array} \right. \quad \begin{array}{l} -r \times \frac{r}{K} - \epsilon = \frac{-1}{K} - \epsilon \\ -\frac{1}{K} - r = \frac{-\epsilon}{K} - y \\ \frac{r}{K} = r \leadsto K = r \end{array}$$

$$-m x^r + m x + 1 = -m - x$$

$$m x^r - (m+1)x - (m+1) = 0$$

$$\Delta < 0 \leadsto (m+1)^r - f_m(-m-1) < 0$$

$$m^r + r m + 1 + f m^r + \epsilon m = am^r + y m + 1 < 0$$

$$\Delta = r_0 \div r_0 = 14 \leadsto \frac{-y \pm r}{1.0} = -1, -\frac{1}{a}$$

$$(-1, -\frac{1}{a}) \leadsto \text{منعرج صحيح}$$

$$\begin{array}{c} -1 \quad -\frac{1}{a} \\ + \quad | \quad - \quad | \quad + \end{array}$$