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$\Delta > 0 \rightarrow b^2 - 4ac > 0 \rightarrow (m+1)^2 - 4(2)(\frac{1}{3}m+2) > 0 \rightarrow m^2 + 2m + 1 - 8m - 16 > 0 \rightarrow m^2 - 6m - 15 > 0$ (الف)

$\rightarrow m_1 = 9, m_2 = -5 \rightarrow \frac{-3 \pm \sqrt{36+60}}{2} \rightarrow (-\infty, -5) \cup (9, +\infty)$

$\Delta = 0 \rightarrow b^2 - 4ac = 0 \rightarrow m^2 - 6m - 15 = 0 \rightarrow m = 9, -5 \rightarrow \{-5, 9\}$ (ب)

$\Delta < 0 \rightarrow b^2 - 4ac < 0 \rightarrow m^2 - 6m - 15 < 0 \rightarrow m = 9, -5 \rightarrow \frac{-3 \pm \sqrt{36+60}}{2} \rightarrow (-5, 9)$ (ج)

$\Delta > 0 \rightarrow m^2 - 6m - 15 > 0 \rightarrow m = 9, -5 \rightarrow \frac{-3 \pm \sqrt{36+60}}{2} \rightarrow (-\infty, -5] \cup [9, +\infty)$ (د)

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$\frac{c}{a} = \frac{1}{m-2} > 0 \rightarrow \boxed{m > 2} \quad \frac{-b}{a} < 0 \rightarrow \frac{m+2}{m-2} < 0 \rightarrow \frac{-1}{+1-1+} \rightarrow \boxed{(-1, 2)} \quad (۱)$ (الف)

$\Delta > 0 \rightarrow (m-2)^2 - 4(1)(m-2) > 0 \rightarrow m^2 - 8m + 12 > 0 \rightarrow \Delta > 0 \rightarrow \text{هوازی} = \boxed{R} \quad (۲)$
 $(۱) \cap (۲) \cap (۳) = \emptyset$

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$\frac{c}{a} < 0 \rightarrow \frac{1}{m-2} < 0 \rightarrow m-2 < 0 \rightarrow m < 2 \quad \frac{-b}{a} < 0 \rightarrow \frac{m+2}{m-2} < 0 \rightarrow \frac{-1}{+1-1+} \rightarrow \boxed{(-1, 2)} \quad (۳)$ (ب)

$\Delta > 0 \rightarrow m^2 - 8m + 12 > 0 \rightarrow \text{هوازی} = \boxed{(-1, 2)} \quad (۱) \cap (۲) \cap (۳) = (-1, 2)$

$\Delta > 0 \rightarrow m^2 - 8m + 12 > 0 \rightarrow \text{هوازی} = \boxed{(-1, 2)} \quad a \neq 0 \rightarrow m-2 \neq 0 \rightarrow m \neq 2 \quad (۴)$ (الف)
 $\frac{c}{a} < 0 \rightarrow \frac{1}{m-2} < 0 \rightarrow m-2 < 0 \rightarrow m < 2 \rightarrow \boxed{m < 2} \quad (۳) \rightarrow (۱) \cap (۲) \cap (۳) = (-\infty, 2)$

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$\frac{-b}{2a} = -2 \rightarrow +8a = +b \rightarrow f(m-2) = -2m-2 \rightarrow 8m-8 = -2m-2 \rightarrow 4m=4 \rightarrow m=1$ (ب)

$\Delta > 0 \rightarrow b^2 - 4ac > 0 \rightarrow f \sin^2 a - f(\frac{1}{2} \times \frac{1}{2}) = 4 \sin^2 a - 4 > 0 \rightarrow 4 \sin^2 a - 4 = 4(\sin^2 a - 1) \rightarrow -4(\cos^2 a)$
 $-4 \cos^2 a > 0 \rightarrow \cos a = 0 \rightarrow \sin^2 a + \cos^2 a = 1 \Rightarrow \sin^2 a = 1 \Rightarrow \sin a = \pm 1 \Rightarrow \sum = \frac{f \sin a \pm \sqrt{\Delta}}{\frac{1}{2}} \rightarrow \frac{f \sin a \pm \sqrt{\Delta}}{\frac{1}{2}} = \frac{4 \pm 4}{\frac{1}{2}} = \frac{8}{\frac{1}{2}} = 16$

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$$(1) \frac{(-x+1)(x+1)(-x-1)(x-2)}{(-x+1)(x+1)} = (-x-1)(x-2) = -x^2 + 12x - 2 =$$

$$-4x^2 + 12x + 0 \Rightarrow x_{max} = \frac{-b}{2a} = \frac{12}{-8} = -\frac{3}{2} \Rightarrow y_{max} = \frac{12 \cdot 19}{-8}$$

$$V(x+y) - V = \Delta x y \quad \Delta y = \frac{c}{a} = -\frac{r}{m} \quad x+y = \frac{m+r}{m}$$

$$\Rightarrow \frac{r_{m+4}}{m} - \frac{vm}{m} = -\frac{1}{m} \Rightarrow r_{m+4} - vm = -1 \Rightarrow + \xi_m = +14 \Rightarrow m = f$$

$$\Rightarrow \Delta y = -\frac{r}{m} = -\frac{1}{r} \Rightarrow x+y = \frac{m+r}{m} = \frac{4}{r} = \frac{r}{r} \Rightarrow (x+y)^r = \frac{4}{r} \Rightarrow x^r + y^r + \frac{r}{-1} = \frac{4}{r}$$

$$\Rightarrow x^r + y^r = \frac{4+r}{r} = \frac{14}{r}$$

$$\frac{\Delta y}{p} = \frac{c}{a} = r \Rightarrow y = \frac{r}{a} \Rightarrow \Delta y = \frac{r}{a} \Rightarrow \frac{\Delta x}{\Delta y} + \frac{r}{\Delta y} \Rightarrow \frac{\Delta x}{\frac{r}{a}} + \frac{r}{\frac{r}{a}} \Rightarrow \frac{\Delta x}{a} + \frac{r}{a}$$

$$= \frac{5^r - rps}{a} \quad p=r \quad \frac{12-2(1)}{a} = \frac{10}{a} (=14)$$

$$y = r(r) + 1 = 1f \quad \frac{r}{1f} \quad y = r(-r) + 1 = f \Rightarrow \frac{r}{f} \quad \frac{0}{f} \rightarrow c=f$$

$$1f = fa + rb + f \frac{x+r}{a} \quad r1 = 9a + 3b + 4$$

$$f = 9a - 3b + f \rightarrow f = 9a - 3b + f$$

$$b-1 = 10a \Rightarrow a=1 \quad b=3 \Rightarrow y = x^r + 3x + f$$

$$\text{نوع } \frac{b}{ra} = \frac{r}{r}$$

$$y = 9x \rightarrow x = r^r + (m+1)x + m + 9 \rightarrow r^r + mx + m + 9 = 0 \rightarrow \Delta = b^r \Delta c = m^r - f(m+1r)$$

$$= m^r - 1m - f1 = 0 \rightarrow \Delta = 4f - f(21) = 184 \rightarrow m = \frac{1+14}{r} = \frac{15}{r}$$