

$$\frac{-b}{2a} = 2 \rightarrow \frac{-b}{a} = 4$$

$$\frac{1}{1-a} = 4$$

$$\frac{1}{4} \rightarrow -\frac{1}{4}x^2 + x + 2$$

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

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$$x_1, x_2 \rightarrow \Delta > 0 \rightarrow 2a - 2m^2 > 0 \rightarrow -\frac{a}{2} < m < \frac{a}{2} \quad \text{I}$$

$$-b > 0 \rightarrow a < 0 \rightarrow m < 0 \quad \text{II}$$

$$\text{I, II} \Rightarrow -\frac{a}{2} < m < 0 \quad \checkmark$$

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$$a=1, \quad x+B=-b=\frac{8}{9}=2$$

$$x\beta=c=\frac{9-a}{9}=\frac{8}{9} \rightarrow m=9$$

$$m(x^2-5x+9)$$

$$\Rightarrow f(x) = 9x^2 - 11x + 4 \quad \checkmark$$

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$$2x^2 - 12 + \frac{m+2}{x} = 0$$

$$p = \frac{1}{x}$$

$$15 = 4$$

$$\Rightarrow 14 - t + 4 - \sqrt{14-2t} = 12 \rightarrow 14 - 2t = t^2 - 14t + 4 \rightarrow t^2 - 14t + 4 = 0$$

$$2x^2 + Bx = 5x^2 - 2p + \frac{2x^2}{\sqrt{14-2t}} \rightarrow t < 1$$

$$\Rightarrow 14 - t + 4 - \frac{(4 - \sqrt{44-14t})}{x}$$

$$\star \rightarrow \rightarrow$$

$$m+2=4 \rightarrow m=2 \quad \checkmark$$

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(a, b)!

$$a(x-2)^2 + 9$$

$$\rightarrow x=0 \rightarrow 4a+9=2 \rightarrow a=-1$$

$$(x-2)^2 = 9$$

$$\rightarrow x \begin{matrix} \nearrow -1 \\ \searrow 5 \end{matrix}$$

$$\{(-1, 5)\} \quad \checkmark$$

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$$\alpha\beta = \frac{q\beta}{\alpha} \rightarrow \alpha = \frac{q}{\beta} \quad \left. \begin{array}{l} -\frac{1}{\alpha} + \beta = \frac{q}{\alpha} \rightarrow \beta = \frac{q}{r} \\ \frac{1}{\alpha} + \frac{1}{\beta} = \frac{1}{r} + \frac{r}{r} = \left(\frac{q}{q}\right) \checkmark \end{array} \right\}$$

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- m = ?

$$\alpha^r - m\beta = 1$$

$$\Delta > 0 \rightarrow m^r + \Lambda m > 0$$

$$(-\infty, -\Lambda) \cup (0, +\infty)$$

$$\rightarrow \underbrace{\alpha^r + \beta^r}_{m^r + r} - r m = 1$$

$$m^r + r m - \Lambda = 0$$

$$\downarrow \rightarrow \begin{array}{l} r \\ -r \\ \times \end{array} \rightarrow -m = (-r) = r \checkmark$$

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$$y_s = 1 = \frac{-a}{f_a} = \frac{\frac{m^r + r m - r}{r}}{\frac{m^r + r m - r}{r}} = 1 \Rightarrow \frac{m}{r} + r - \frac{r}{m} = 1$$

$$m \neq 0 \Rightarrow \frac{m^r}{r} - r m - \frac{1}{r} = 0$$

$$m < 0 \Rightarrow m = -r \rightarrow -r^r + r^2 + \frac{1}{r} = 0$$

$$\checkmark \rightarrow r$$

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$$\frac{1}{\alpha} + \frac{1}{\beta}$$

$$a(x-r)^r + \frac{x^r}{r} \rightarrow a = -\frac{1}{r} \rightarrow -\frac{x^r}{r} + rx + \frac{1}{r} = 0$$

$$\rightarrow \frac{r \cdot r}{r} = \left(-\frac{1}{r}\right) \checkmark$$

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$$r - \Lambda a - \lambda + r a^r + q a + r = 0 \Rightarrow r a^r - r a - 1 = 0$$

$$\frac{1}{r} \rightarrow \Delta > 0 \checkmark$$

$$r x^r - \frac{1}{r} x + \frac{1}{r} = 0$$

$$x^r - \Lambda x + 1 = 0$$

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