

$$\frac{-b}{ra} = 2 \quad \frac{-1}{ra-2} = 2 \Rightarrow ra-2=1 \rightarrow ra=3 \rightarrow a=\frac{3}{r}$$

$$a-1 = \frac{3}{r} - 1 = \frac{1}{r} \Rightarrow -\frac{1}{r}x^2 + x + 3 = 0$$

$$x = \frac{-1 \pm \sqrt{1+3}}{-\frac{1}{r}} \quad \begin{cases} x = -1 \\ x = 9 \end{cases}$$

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$$m < 0$$

$$\Delta > 0 \rightarrow ra - fm^2 > 0 \rightarrow (a - rm)(a + rm) > 0 \quad \frac{-a}{-r} + \frac{a}{r} =$$

$$\frac{-a}{r} < m < 0$$

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$$S = \frac{3-\sqrt{a}}{r} + \frac{3+\sqrt{a}}{r} = \frac{6}{r} = 2$$

$$P = \left(\frac{3-\sqrt{a}}{r}\right)\left(\frac{3+\sqrt{a}}{r}\right) = \frac{9-a}{r} = \frac{r}{9}$$

$$x^2 - 2x + \frac{r}{9} = 0$$

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$$\alpha + \beta = 4 \Rightarrow \beta = 4 - \alpha$$

$$ra^2 + (4-\alpha)^2 = 12 \rightarrow ra^2 + \alpha^2 + 16 - 8\alpha = 12 \rightarrow ra^2 - 8\alpha + 4 = 0$$

$$\Rightarrow \alpha^2 - 2\alpha + 1 = 0 \rightarrow (\alpha - 1)^2 = 0 \Rightarrow \alpha = 1$$

$$m = \alpha \rightarrow r - 8 + m + 2 = 0 \Rightarrow m = 4$$

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$$\frac{-b}{ra} = 2 \Rightarrow -b = 2a \quad \frac{x=2}{ra-2b+d=9} \rightarrow ra-1a=9$$

$$c = d \rightarrow -ra = 9 \rightarrow a = -1$$

$$-x^2 + 2x + d = 0 \rightarrow -(x-d)(x+1) \quad \frac{-1}{-1} + \frac{d}{1} =$$

$$(-1, d) \text{ only}$$

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$$\alpha + \beta = \frac{V}{\alpha} \begin{cases} r + \beta = \frac{V}{r} \Rightarrow \beta = \frac{V}{r} \\ -r + \beta = \frac{V}{-r} \Rightarrow \beta = \frac{V}{r} \checkmark \end{cases} \Rightarrow \begin{cases} \alpha = -r \\ \beta = \frac{V}{r} \end{cases}$$

$$\alpha\beta = \frac{V\beta}{\alpha} \Rightarrow \alpha^2 = V \Rightarrow \alpha = \pm\sqrt{V}$$

$$\frac{1}{\alpha} + \frac{1}{\beta} = \frac{-1}{r} + \frac{r}{r} = \frac{-r+V}{r} = \frac{V}{r}$$

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$$\alpha^r \in r_m - m\alpha \Rightarrow \alpha^r - m\beta = 1 \rightarrow r_m - m\alpha - m\beta = 1$$

$$m(r + (\alpha + \beta)) = 1 \rightarrow m(r + m) = 1 \rightarrow m^r + r_m - 1 = 0$$

$$\Rightarrow m = -r \times \Delta < 0$$

$$m = r \checkmark \Delta > 0 \Rightarrow r^r + r_m - r = 0 \Rightarrow r = -r$$

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$$\frac{-\Delta}{r_a} = 1 \Rightarrow \frac{1 - r_m - r_m}{-r_m} = -1 \Rightarrow 1 - r_m - r_m = -r_m$$

$$r_m - r_m - 1 = 0 \Rightarrow m^r - r_m - 1 = 0 \rightarrow m = r \times m < 0$$

$$m = -r \checkmark$$

$$-r\alpha^r + r\alpha + r = 0 \rightarrow -r^r + r\alpha + r = 0 \rightarrow -(r-r)(\alpha+1) = 0$$

$$\Rightarrow r = r \checkmark \quad \boxed{r = r}$$

$$r = -1 \times$$

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$$\frac{-b}{r_a} = r \rightarrow -b = r_a$$

$$a\alpha^r - r_a + r = y \xrightarrow{\alpha=r} r_a - r_a + r = y$$

$$\rightarrow -r_a = r \rightarrow a = \frac{1}{r}, b = r \Rightarrow -\frac{1}{r} r^r + r + r = y$$

$$\frac{1}{\alpha} + \frac{1}{\beta} = \frac{\alpha + \beta}{\alpha\beta} = \frac{r}{-1} = -\frac{1}{r}$$

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$$r^r - (r_a + r)\alpha + (\alpha+1)(r_a + r) = 0 \Rightarrow \alpha + 1 = r \Rightarrow \alpha = 1$$

$$r_a + r = r \Rightarrow \alpha = \frac{1}{r}$$

$$\xrightarrow{\alpha=1} r^r - 1\alpha + 1 = 0 \rightarrow (r-r)(\alpha-r) = 0 \Rightarrow \boxed{r = r}$$

$$\xrightarrow{\alpha=\frac{1}{r}} r^r - \frac{1}{r}\alpha + \frac{r}{r} = 0 \rightarrow (r-r)(\alpha-\frac{1}{r}) = 0 \Rightarrow \boxed{r = \frac{1}{r}}$$

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