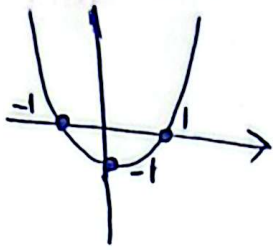


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$$y = u^2 - 1 \Rightarrow y' = 2u$$

$$\begin{matrix} u_1 = a \\ u_2 = -a \end{matrix} \Rightarrow y'_1 \cdot y'_2 = -1 = -4a^2 \Rightarrow a = \pm \frac{1}{2}$$

$$y = \frac{1}{2} - 1 = -\frac{1}{2} \Rightarrow x = \frac{1}{2} \Rightarrow \left(\frac{1}{2}, -\frac{1}{2} \right)$$

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$$a = \frac{\Delta y}{\Delta u} = \frac{11}{3} = 4 \Rightarrow y = 9u - 9 \Rightarrow 4u - 9 = \frac{a}{2u - 1}$$

$$(4u - 9)(2u - 1) - a \Rightarrow 8u^2 - 26u + 9 - a = 0 \Rightarrow \Delta = 0 \Rightarrow b^2 = 4ac$$

$$2^2 \times \frac{1}{9} = 4 \times \frac{1}{9} \times (9 - a) \Rightarrow a = -1 \quad f(u) = \frac{-3}{2u - 1} \Rightarrow f(a) = \frac{-1}{3}$$

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$$u = 1 \Rightarrow 2 + b = \frac{1 + a}{a + 1} \Rightarrow \boxed{b = -1}$$

$$y'_1 = y'_2 \Rightarrow 2 = \frac{1 - a^2}{(a + 1)^2}$$

$$a - b = \left(\frac{2}{3} \right)$$

$$2a^2 + 2a + 2 = 1 - a^2 \Rightarrow 3a^2 + 2a + 1 = 0$$

$$\frac{-b \pm \sqrt{\Delta}}{2a} \Rightarrow \frac{-2 \pm \sqrt{4}}{6} \Rightarrow a = -1 \rightarrow \text{غیر صحیح}$$

$$a = \frac{-1}{3}$$

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$$f'(u) = 4u^2 - 4u - 12 \quad \left| \begin{array}{c} -1 \\ \lambda \end{array} \right. , \left| \begin{array}{c} 1 \\ -19 \end{array} \right. \quad \alpha = \frac{\partial y}{\partial u} = \frac{2V}{-1} = -2$$

$$y = -2u - 1$$

$$f'(u) = 4u^2 - 4u - 12 \quad (u-2)(u+1)$$

$$4u^2 - 4u - 12 = 0 \Rightarrow 4u^2 - 4u - 12 = 0$$

$$\Delta = 16 + 48 > 0 \rightarrow \text{حساب}$$

$$y = ku^k + (k+1)u^r \rightarrow y' = kku^{k-1} + r(k+1)u^{r-1} \Rightarrow y'' = 4ku + r(k+1)$$

$$u = \frac{-r(k+1)}{4k} = \frac{-(k+1)}{2k}$$

$$y = au^c + \alpha u^r + bu - 1 \Rightarrow \left| \begin{array}{c} -1 \\ -\varepsilon \end{array} \right. \Rightarrow -1 = -1 + \alpha - b - 1 \Rightarrow \alpha - b = -1$$

$$y' = \alpha u^{r-1} + r\alpha u + b$$

$$f(0) = 1 \Rightarrow c = 1 \quad f'(u) = 3u^2 + 2\alpha u + b$$

$$f(0) = 0 \Rightarrow b = 0$$

$$\Rightarrow f'(u) = 3u^2 + 2\alpha u = 0 \quad \left. \begin{array}{l} \rightarrow u=0 \\ \rightarrow u = -\frac{2\alpha}{3} \end{array} \right\} \Rightarrow f\left(-\frac{2\alpha}{3}\right) = 0 \Rightarrow \left(\frac{-2\alpha}{3}\right)^3 + \alpha\left(\frac{-2\alpha}{3}\right) + 1 = 0$$

$$\alpha = -3 \Rightarrow u = \frac{-2(-3)}{3} = 2$$

$$a^c = -2V$$