

داریم: $y = \frac{3x-1}{2} \xrightarrow{C \leftrightarrow D} x = \frac{2y-1}{3} \rightarrow \frac{2x+1}{3} = y$

مساحت = $1 \times \frac{2}{3} = \frac{2}{3}$

الف) $y = x^2 - 2x + 3$
 $z = \frac{x^2}{2} = \frac{1}{2}$
 $y_s: 1 - 2 + 3 = 2$
 $y = (x-2)^2 + 1 \rightarrow x = (y-2)^2 + 1$
 $\sqrt{x-1} + 2 = y$
 $\hookrightarrow D_f: x \geq 1$

ب) $x^2 - 2x + 3, y \rightarrow$...
 $y = (x-2)^2 + 1, x = (y-2)^2 + 1$
 $\sqrt{x-1} + 2 = y$
 $\hookrightarrow x \geq 1 \cup D_f: x \geq 3$

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$y_1 = \frac{x_1}{\sqrt{x_1^2 - 5}} \left. \vphantom{\frac{x_1}{\sqrt{x_1^2 - 5}}} \right\} \rightarrow \frac{x_1}{x_2} = \frac{\sqrt{x_1^2 - 5}}{\sqrt{x_2^2 - 5}} \rightarrow \frac{x_1^2}{x_2^2} = \frac{x_1^2 - 5}{x_2^2 - 5}$

برای $x^2 - 2x + k > -x^2 + 4x + 14$...
 $-12 > 4k \rightarrow -4 > k \rightarrow (-\infty, -4)$

$$|y| = |r\lambda + |\lambda|| \rightarrow |y| = r|\lambda| \rightarrow |y| = \varepsilon y - r\lambda \rightarrow r\lambda = \varepsilon y - |y| \rightarrow \frac{1}{r}y - |y| = \lambda$$

$$y = r\lambda + |\lambda| \rightarrow |\lambda| = y - r\lambda$$

$$y = \left(\frac{1}{r}\right)x - |\lambda| \quad \text{so } a = \frac{1}{r} \quad b = -1$$

$$ab = -\frac{1}{r}$$

$$f^{-1}(x) = \frac{-mx + \varepsilon}{x - r} \rightarrow f^{-1} = \frac{r\lambda + \varepsilon}{x - r} \rightarrow f \circ f^{-1} = \frac{r\left(\frac{r\lambda + \varepsilon}{x - r}\right) + \varepsilon}{\frac{r\lambda + \varepsilon}{x - r} - r} \rightarrow$$

$$f(x) = \frac{k}{r+m} \cdot x^{-1} \rightarrow 1 = -r - m \rightarrow r = -m \rightarrow \boxed{m = -r}$$

$$\frac{r\lambda + \varepsilon}{x - r} - r = \frac{r\lambda + \varepsilon - r(x - r)}{x - r} = \frac{r\lambda + \varepsilon - rx + r^2}{x - r}$$

$$\rightarrow f \circ f^{-1} = rx + \frac{r\lambda + \varepsilon}{x - r} \rightarrow \frac{rx^2 - r\lambda + \varepsilon}{x - r} = -x$$

$$rx^2 - r\lambda + \varepsilon = -x^2 + rx - r\lambda - \varepsilon \rightarrow rx^2 - r\lambda + \varepsilon = -x^2 + rx - r\lambda - \varepsilon$$

$$y = x + f(x) \rightarrow \{y\} = \{x + f(x)\} \rightarrow \{y\} = \omega[x] \rightarrow \{y\} = \frac{\omega}{\varepsilon}x(x - \lambda)$$

$$f(x) = \frac{y - x}{\varepsilon}$$

$$g(x) = y = \frac{\omega}{\varepsilon}x - [x] \quad \text{so } x = \frac{\omega}{\varepsilon}y - [y]$$

$$f - g(x) = x + f(x) - \frac{\omega}{\varepsilon}x + [x] \rightarrow -\frac{x}{\omega} + \omega[x] = f - g(x)$$