

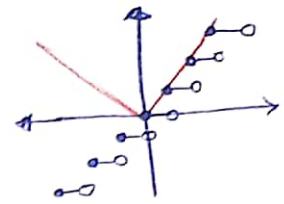
$$c) \sqrt{x^2 - x} \rightarrow x^2 - x \geq 0 \rightarrow x(x-1) \geq 0 \rightarrow \frac{-1 \pm \sqrt{1+4}}{2} \rightarrow D = [-1, 0] \cup [1, +\infty)$$

-v
(r)

$$c) \frac{1}{|x|-1} \rightarrow |x|-1 > 0 \rightarrow |x| > 1 \rightarrow x > 1 \text{ or } x < -1 \rightarrow D = \mathbb{R} - [-1, 1]$$

$$c) y = \sqrt{\frac{1}{|x| - [x]}} \rightarrow |x| - [x] \neq 0 \rightarrow |x| \neq [x]$$

$$D = \mathbb{R} - \{0, 1, 2, \dots\} = \mathbb{R} - \mathbb{W}$$



-A
(r)

$$\sqrt{x} + \sqrt{y} = 9 \rightarrow x \geq 0, y \geq 0 \rightarrow 9 - \sqrt{x} = y \rightarrow 9 - \sqrt{x} \geq 0 \rightarrow \sqrt{x} \leq 9 \rightarrow x \leq 81 \rightarrow D = [0, 81]$$

$$y = \frac{1}{\sqrt{[x + \frac{1}{x}] + [x + \frac{x}{x}]}} \rightarrow [x + \frac{1}{x}] + [x + \frac{x}{x}] + y \geq 0 \rightarrow y [x + \frac{1}{x}] > -y \rightarrow [x + \frac{1}{x}] > -1 \rightarrow 0 < x + \frac{1}{x} \rightarrow \frac{1}{x} < x$$

(r) -9

$$y = \sqrt{1 - \log(x-a)} \rightarrow x-a > 0 \rightarrow x > \frac{a}{r} \rightarrow 1 - \log(x-a) \geq 0 \rightarrow 1 \geq \log(x-a) \rightarrow 10 \geq x-a \rightarrow \frac{10+a}{r} \geq x$$

(r) -10

$$D = (\frac{a}{r}, \frac{10+a}{r}] \rightarrow c-b = \frac{10+a}{r} - \frac{a}{r} = \frac{10}{r} = \boxed{10}$$