

$$x(x-9)$$

$$y = \sqrt{\frac{x^2 - 9x}{x^2 - x}} = \frac{x(x-9)}{x(x-1)(x+1)(x-1)}$$

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$$D_f = (-1, 0) \cup (0, 1) \cup [9, +\infty)$$

$$D_f = \mathbb{R} - \{-1, 0, 1\}$$

$$y = \frac{x+1}{\sqrt{x+|x|}} \quad x+|x| > 0 \quad D_f = (0, +\infty)$$

$$y = \frac{1}{\sqrt{2-x}} \quad 2-x > 0 \quad D_f = (-\infty, 2)$$

$$y = \frac{1}{\sqrt{x|x|}} \quad x|x| > 0 \quad D_f = (0, +\infty)$$

$$y = \sqrt{2-x} \quad 2-x \geq 0 \quad D_f = (-\infty, 2]$$

$$y = \sqrt{\left[x - \frac{1}{x}\right] + \left[x + \frac{1}{x}\right]} \quad \left[x - \frac{1}{x}\right] + \left[x + \frac{1}{x}\right] \geq 0$$

$$y = \sqrt{\left[x - \frac{1}{r}\right] + \left[-x + \frac{1}{r}\right]}$$

نسبة (5)

$$y = \frac{r}{\sin x - 1} \neq 0 \quad \sin x \neq 1 \quad D = \mathbb{R} - \left\{ \frac{\pi}{2} + 2k\pi \right\}$$

$$y = \frac{r}{r \sin^2 x - 1} \neq 0 \quad r \sin^2 x \neq 1 \quad \sin^2 x \neq \frac{1}{r} \rightarrow \sin x \neq \pm \frac{1}{\sqrt{r}}$$

$$D = \mathbb{R} - \left\{ \frac{\pi}{2} + 2k\pi, \frac{3\pi}{2} + 2k\pi \right\}$$

نسبة (6)

$$y = \sqrt{r \sin x - 1} \quad r \sin x \geq 1 \quad \sin x \geq \frac{1}{r} \quad D = \left\{ \frac{\pi}{2} + 2k\pi, \frac{3\pi}{2} + 2k\pi \right\}$$



$$y = \sqrt{\cos x - 1}$$

$$\cos x \geq 1 \quad D = \{2k\pi\}$$

نسبة (7)

$$\cos y = |x| - r \quad -1 \leq |x| - r \leq 1 \rightarrow r - 1 \leq |x| \leq r + 1$$

$$y = \arcsin(x^2 + 3x + 1) \quad D = [-r-1] \cup [r+1]$$

$$-1 \leq x^2 + 3x + 1 \leq 1$$

$$0 \leq x^2 + 3x \leq 2 \quad D = [-3, -2] \cup [0, 2]$$

$$0 \leq (x+1)(x+2) \leq 2 \quad -3 \leq x \leq 0$$

$$x \leq -2 \text{ or } x \geq 0 \quad \text{بالتالي}$$

$$y = \sqrt{r - \log_r(x-r)} \quad x-r > 0 \rightarrow \boxed{x > r} \quad (A)$$

$$r - \log_r(x-r) \geq 0 \rightarrow \log_r(x-r) \leq r \rightarrow x-r \leq r^r \quad \boxed{x \leq 11}$$

$$D = (r, 11] \quad x(x^r-1)(x-1)(x+1)$$

$$y = \log(x^r - x) \quad x^r - x > 0$$

$$D_f = (-1, 0) \cup (1, +\infty)$$

$$y = \frac{r}{x^r+1} \quad D = \mathbb{R}$$

$$y = \frac{r}{x^r-1} \quad x^r-1 \neq 0 \quad x^r \neq 1 \quad x \neq \pm 1$$

$$D = \mathbb{R} - \{-1, 1\}$$

$$y = \frac{r}{x^r-r} \quad x^r-r \neq 0 \quad x^r \neq r \quad x \neq \pm \sqrt[r]{r}$$

$$D = \mathbb{R} - \{-\sqrt[r]{r}, \sqrt[r]{r}\}$$

$$y = \frac{r}{x^r-r} \quad x^r-r \neq 0 \quad x^r \neq r \quad x \neq \pm \sqrt[r]{r}$$

$$D = \mathbb{R} - \{-\sqrt[r]{r}, \sqrt[r]{r}\}$$

$$y = (rx+1)! \quad rx+1 \in \mathbb{N} \quad (10)$$

$$x \in \frac{n-1}{r}$$

$$D = \left\{ x \mid x = \frac{n-1}{r}, n \in \mathbb{N} \right\}$$

...../...../.....

$$y = \left(\frac{rx - r}{rx - \omega} \right) ! \quad \frac{rx - r}{rx - \omega} \in W / \quad rx - r = rxW / - \Delta W /$$

$$rx - rxW / = r - \Delta W /$$

$$D_f = \left\{ x \mid x = \frac{\Delta K - r}{rx - r}, K \in W / \right\} \quad x(rx - rxW /) = r - \Delta W /$$

$$x = \frac{r - \Delta W /}{rx - rxW /} \Rightarrow \frac{\Delta W - r}{rxW - r}$$