

(7)

$$y = \frac{x+3}{2x^3+3x^2-1x+3}$$

$$2x^3+3x^2-1x+3=0$$

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

$$2x^2+6x^3-(x-1)(2x-1)(x+3)$$

$$x=1, \frac{1}{2}, -3$$

$$Df = \mathbb{R} - \left\{ -3, \frac{1}{2}, 1 \right\}$$

الف)  $y = \frac{x+3}{x^3-2x^2+2x-1}$

$$\frac{x^3-2x^2+2x-1}{x-1} = x^2-x+1$$

$$\Delta = 1 - 4 = -3 < 0 \rightarrow \text{ریشه حقیقی ندارد}$$

$$x-1=0 \rightarrow x=1$$

$$Df = \mathbb{R} - \{1\}$$

$$y = \frac{x+3}{2x^3+9x^2+10x+3}$$

$$2x^3+9x^2+10x+3$$

$$x+1$$

$$2x^2+7x+3 \rightarrow (2x+1)(x+3)$$

$$(x+1) \rightarrow -1, -\frac{1}{2}, -3$$

$$Df = \mathbb{R} - \left\{ -3, -1, -\frac{1}{2} \right\}$$

(2)

$$y = \sqrt{\frac{x+3}{x^3-2x^2+2x+1}}$$

$$(x-1)(x^2-x+1)$$

$$x^2-x+1 > 0 \rightarrow 1, 2, 3 \rightarrow Df = (-\infty, 3] \cup (1, \infty)$$

(3)  $\frac{1}{2} (1+\infty)$

$$y = \frac{2}{x^2-5x+5}$$

$$x^2-5x+5 \mid x-1 \rightarrow -2x+5$$

Ans

$$x^2-5x+5 \rightarrow (x-1)(x-5)$$

$$x-1 < 0 \Rightarrow \text{این برای } x < 1$$

$$x^2-5(1-x)-2x+5=0 \rightarrow x^2+3x=0 \rightarrow x(x+3)=0$$

$$Df = \mathbb{R} - \{ -3, 0, 2, 9 \}$$

# گزارش پایان دوره آموزش افرادی که ارتقا و تغییر شغل می‌یابند

نام و نام خانوادگی:

شماره پرسنلی:

واحد:

عنوان شغل:

کد شغل:

موضوع گزارش:

صفحه:

کسر اعزلی

$$y = \sqrt{1-x} - 2$$

$$\rightarrow [-x] \geq 1 \rightarrow -x \geq 1$$

$$x \leq -1$$

$$Df = (-\infty, -1]$$

ع

$$y = \frac{3x^2 + 4}{[x]^2 - 2[x] - 3} \rightarrow [x]^2 - 2[x] - 3 \neq 0 \rightarrow ([x] - 3)([x] + 1) \neq 0$$

$$[x] \neq 1, [x] \neq 3 \rightarrow Df = \mathbb{R} - ([3, 4) \cup [-1, 0))$$

$$\rightarrow x \in [3, 4) \cup [-1, 0)$$

الف)  $y = \sqrt{x - \frac{1}{3}} + \left(x + \frac{2}{3}\right) + 1$

$$\sqrt{x - \frac{1}{3}} + 1 \geq 0 \rightarrow x - \frac{1}{3} \geq -1$$

$$x - \frac{1}{3} \geq 0 \rightarrow x \geq \frac{1}{3} \rightarrow Df = \left[\frac{1}{3}, +\infty\right)$$

در صورت صفر

د

$$y = \sqrt{2 \sin x - 1} \rightarrow 2 \sin x \geq 1 \rightarrow \sin x \geq \frac{1}{2} \rightarrow Df = \left[2k\pi + \frac{\pi}{6}, 2k\pi + \frac{5\pi}{6}\right]$$

$$\frac{dx}{4}$$

و

$$y = \sqrt{1 - 2 \cos x} \rightarrow 1 - 2 \cos x \geq 0 \rightarrow \cos x \leq \frac{1}{2} \rightarrow Df = \left[2k\pi + \frac{2\pi}{3}, 2k\pi + \frac{4\pi}{3}\right]$$

$$\frac{dx}{3}$$

مسئول آموزش فاحیه

دفتر فنی واحد

نام و نام خانوادگی مدیر

(1)

$$\text{a)} y = \arcsin(x^2 + 3x + 1) \rightarrow -1 \leq x^2 + 3x + 1 \leq 1$$

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

$$x^2 + 3x \leq 0 \rightarrow x(x+3) \leq 0$$

$$\begin{array}{ccc} -2 & -1 & 0 \\ + & - & + \end{array} \quad \begin{array}{ccc} -3 & 0 & + \\ + & - & + \end{array}$$

$$Df = [-2, -1] \cup [-3, 0]$$

$$\text{b)} \cos y = \sqrt{4-2x} \rightarrow -1 \leq \sqrt{4-2x} \leq 1$$

$$4-2x \leq 1 \rightarrow x \geq \frac{3}{2} \rightarrow 4-2x \geq 0 \rightarrow x \leq 2 \rightarrow Df = \left[\frac{3}{2}, 2\right]$$

$$\text{c)} y = \log_2(1 - \log_2 x) \rightarrow x > 0 \rightarrow \log_2 x < 1 \rightarrow x < 2, x > 0$$

$$Df = (0, 2)$$

(9)

$$\text{d)} y = \log_2(1 - \log_2 x) \rightarrow x > 0 \rightarrow \log_2 x < 1 \rightarrow x < 2 \rightarrow Df = (0, 2)$$

$$Df = \left(\frac{1}{2}, +\infty\right)$$

$$\text{e)} y = \sqrt{4x - x^2} - 1 \rightarrow 4x - x^2 \geq 0 \rightarrow x(4-x) \geq 0$$

$$4x - x^2 \geq 0 \rightarrow x(4-x) \geq 0 \rightarrow (x-0)(x-4) \leq 0$$

$$Df = [0, 4]$$

(10)

$$y = \left(\frac{3x+2}{x+1}\right)! \rightarrow \frac{3x+2}{x+1} \in \mathbb{N} \quad 3x+2 \in x+1 + \mathbb{N}$$

$$3x - (x+1) \in \mathbb{N} - 2 \rightarrow \frac{x-1}{2} \in \mathbb{N} \rightarrow Df = \left\{x \mid x = \frac{2k-1}{2}, k \in \mathbb{N}\right\}$$

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

$$\left[x - \frac{1}{\psi}\right] \geq 0 \rightarrow x \geq \frac{1}{\psi}, 0 \rightarrow x \geq \frac{1}{\psi}$$

$$\psi x + \frac{1}{\psi} + 1 \geq 0 \rightarrow \psi x \geq -\frac{\psi}{\psi}$$

$$x \geq -\frac{\psi}{\psi} \rightarrow Df = \left[-\frac{\psi}{\psi}, +\infty\right)$$

$$\cancel{f(x)} = y = \sqrt{\left[x - \frac{1}{\psi}\right] + \left[x + \frac{\psi}{\psi}\right]}$$

$$\left[x - \frac{1}{\psi}\right] \geq 0 \rightarrow x \geq \frac{1}{\psi}$$

$$x \geq \frac{1}{\psi} \rightarrow Df = \left[\frac{1}{\psi}, +\infty\right)$$

$$\frac{Df}{Dx} \rightarrow Df = x$$

$$\cot x + 1$$

$$\cancel{Df = x}$$

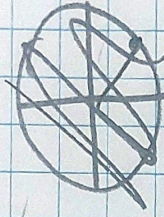
$$\tan x + 1 \rightarrow \tan x \neq -1$$

$$\cos x \neq 0 \rightarrow \left[x + \frac{\pi}{2}\right]$$

$$Df = \mathbb{R} - \left\{ \right.$$

$$y = \sqrt{1 - \varepsilon \sin^2 x}$$

$$\sin x \geq \frac{1}{\psi} \rightarrow \left[x \pm \frac{\pi}{4}\right]$$



$$\left[x + \frac{\pi}{2}\right]$$

$$\rightarrow 1 - \varepsilon \sin^2 x$$

$$\left[x - \frac{\pi}{2}, x + \frac{\pi}{2}\right]$$