

Subject : رياضيات

Day: _____ Month: _____ Year: _____

$$1 \quad \sqrt{\frac{x^2+1-2x-x^2}{n(n-1)}} \quad \frac{0 \quad 1}{+ \quad - \quad + \quad -} \quad D_f = (-\infty, 0) \cup [1, \infty)$$

$$4 \quad \frac{n-2x-2}{(n)(n+1)} = \frac{-x-2}{n(n+1)} \rightarrow 0, -1$$

$$5 \quad \frac{2x+4+x-1}{(n-1)(n+2)} = \frac{3x+3}{(n-1)(n+2)} \rightarrow -\frac{3}{n}$$

$$7 \quad D_f = \mathbb{R} \setminus \{-2, 0, 1, -1, -\frac{3}{n}\}$$

$$9 \quad \sqrt{(1/x^2-9)(2x-x^2)} \geq 0$$

$$10 \quad x = -2 \quad \rightarrow \quad x = \frac{2}{x}$$

$$11 \quad D_f = (-\infty, -2) \cup (\frac{2}{x}, +\infty)$$

$$12 \quad 1) \quad n-1 \geq 0 \quad n \geq 1 \quad \sqrt{y+1} = 3 - \sqrt{x-1}$$

$$13 \quad 3 - \sqrt{x-1} \geq 0 \quad 3 \geq \sqrt{x-1} \quad \text{عوض} \quad n \leq 12$$

$$14 \quad D_f = [1, 12]$$

$$16 \quad \frac{x^2-x-2}{(n-2)(n+1)} \quad \frac{-1 \quad 2}{+ \quad - \quad - \quad +} \quad D_f = (-\infty, 1) \cup (2, +\infty)$$

$$18 \quad x^2-1 \geq 0 \quad n^2 \geq 1 \quad n \geq 1 \quad n \leq -1$$

$$20 \quad x = -2 \rightarrow 3-2a-1 = 0 \quad 2a = -1$$

$$21 \quad a = -\frac{1}{2}$$

$$23 \quad 3 - \frac{1}{2}x - x^2 = 0 \quad -2x^2 - x + 4 = 0 \quad x^2 + x - 12 = 0$$

$$24 \quad a+b = -\frac{1}{2} + \frac{3}{2} = 1 \quad (n-4)(n+3)$$

$$-2 = \frac{3}{-2} \quad \rightarrow \quad \frac{3}{-2} = \frac{3}{2} = b$$



Subject: ساراسینینا

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$$g(x) = \begin{cases} 2x-2 & x \geq 1 \\ x+3 & x < 1 \end{cases} \rightarrow \begin{cases} 2x-2 \geq 1 & x \geq 1 \\ x+3 \geq 1 & x < 1 \end{cases} \rightarrow [1, \infty) \cup (-\infty, -2) = (-\infty, -2) \cup [1, \infty)$$

$$D_f = [-3, \infty)$$

$$\sqrt{\left(\sin \frac{\pi}{r} + \cos 2\pi\right)} = \sqrt{\frac{1}{r} + 1} = \frac{\sqrt{r+1}}{r}$$

$$\sqrt{\left(\frac{1}{r} + 1\right)^2} - \frac{1}{r} \times \frac{\sqrt{r+1}}{r} =$$

$$\frac{r + \sqrt{r+1} - \sqrt{r+1} - 1}{r} = -\frac{1}{r}$$

$$\sqrt{\frac{a+1}{a-1}} = a$$

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

$$\frac{2a}{a-1} = a \Rightarrow \frac{2a}{a-1} = a \Rightarrow 2a = a(a-1) \Rightarrow a^2 - a - 2 = 0 \Rightarrow (a-2)(a+1) = 0 \Rightarrow a = 2 \text{ or } a = -1$$

$$a \in \mathbb{R} - \{1\}$$

$$g(a) = \sqrt{a^2-1} \quad \sqrt{a^2-1} = -r$$

$$(\sqrt{a^2-1})^2 - r \sqrt{a^2-1} + r = 0 \quad \sqrt{a^2-1} = t$$

$$t^2 - r t + r = 0 \quad (t-r)^2 = 0 \quad t = r$$

$$r = \sqrt{a^2-1} \Rightarrow a^2-1 = r^2 \quad a^2 = r^2+1 \quad a = \pm \sqrt{r^2+1}$$

Subject ساراسینینا

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$$y(1) \xrightarrow{x=1} 1 - 5 + 4 = 0$$

ردیف ۱

$$y(-2) \xrightarrow{x=-2} 34 + 2 + 4 = 40 \quad 40 \times 2 = 80$$

ردیف ۱۰

$$f \cos^2 x + 1 \cos x = 3, 1$$

$$f \cos^2 x + 1 \cos x - \frac{1}{x} = 0 \quad \frac{-1 \pm \sqrt{1 \pm 4}}{2}$$

$$1 \cos^2 x + 1 \cos x - 1 = 0 \quad 14$$

$$\cos x \rightarrow x = 90^\circ$$

$$\cos x = \frac{1}{x} \quad \frac{1}{x} \rightarrow x = 1$$

$$\tan^2 x = 3$$