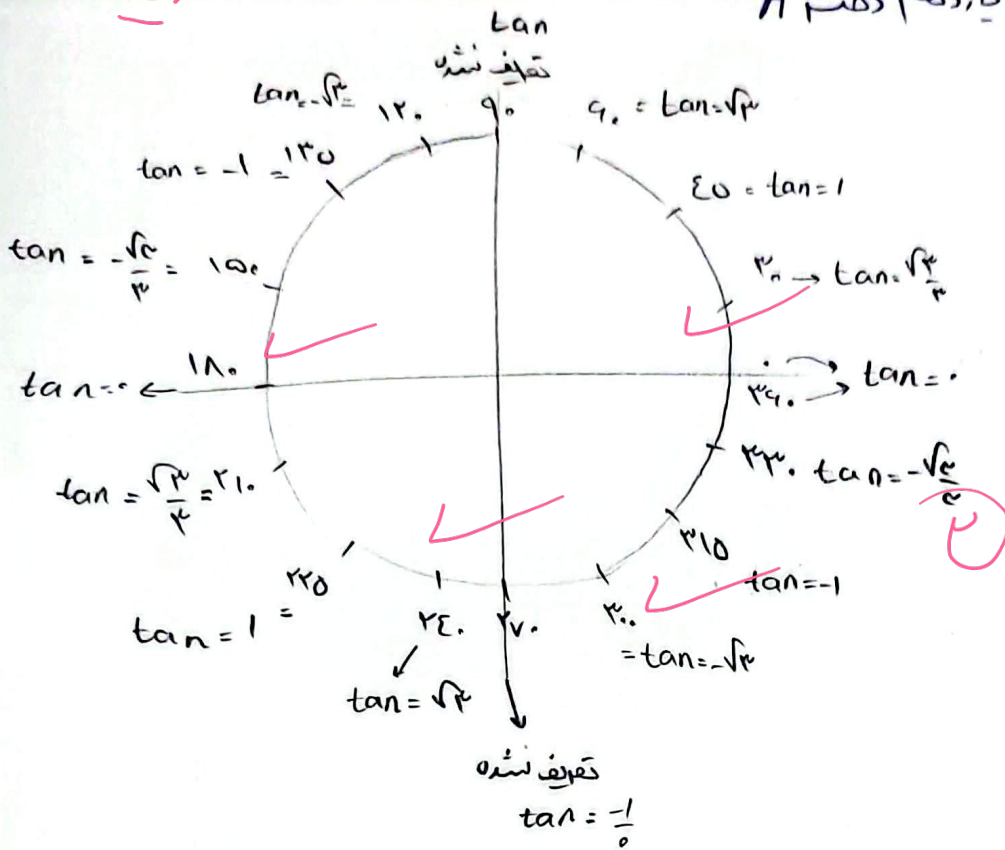


۲۰ آئین

باران مستری بازدهم دقت A



①

الف) $\frac{1}{4} + (-1) + 2 \times -1 = \frac{1}{4} - 3 = -\frac{11}{4}$

②

ب) $\frac{\sqrt{3}}{4} + \frac{\sqrt{3}}{4} - 2 \times \frac{\sqrt{3}}{4} = \frac{0\sqrt{3}}{4} = 0$

ج) $-\frac{\sqrt{3}}{4} + 2 \times \frac{\sqrt{3}}{4} - 2 \times \frac{\sqrt{3}}{4} = \frac{2\sqrt{3}}{4} + \frac{2\sqrt{3}}{4} = \frac{4\sqrt{3}}{4} = \sqrt{3}$

د) $\cos(0) + \sin(\frac{\pi}{4}) = 1 + \frac{1}{\sqrt{2}} = \frac{\sqrt{2} + 1}{\sqrt{2}}$

③

$n=a \rightarrow a^2 + \epsilon a = 2a + a + 2$

$a^2 + a - 2 = 0 \rightarrow (a+2)(a-1) = 0$

$$\begin{cases} m^2 + \epsilon m & m \geq 1 \\ 2m + 2 & m \leq 1 \end{cases}$$

$a=1 \rightarrow f(1) \rightarrow 1$
در هر دو صورت
 $x^2 + \epsilon x = 1 + \epsilon = 2$

$m=-3 \rightarrow 2(9) - b = a + (2)(-5)$
در هر دو صورت

$18 - b = a - 10 \rightarrow a + b = 28$

④

3

الف) $y = \frac{1}{n^2 - 2n}$ $n^2 - 2n \neq 0$
 $\frac{n^2(n-2)}{n} \neq 0$ $D = \mathbb{R} - \{0, 2\}$

$\Rightarrow y = \frac{1}{2n^2 + 8n^2 + 2n + 2} \neq 0$
 $\div 2 \rightarrow n^2 + 4n^2 + n + 1 \neq 0$
 $\begin{array}{c} 1 \quad \times \quad 1 \\ \hline n(n^2+1) + 2(n^2+1) \neq 0 \end{array}$
 $(n^2+1)(2+n) \neq 0$
 $\oplus$ $\ominus$ $D = \mathbb{R} - \{-2\}$

4

الف) $\sqrt{n^2 - 1} \geq 0 \rightarrow n^2 \geq 1 \rightarrow \begin{matrix} n \geq 1 \\ n \leq -1 \end{matrix}$
 $\sqrt{n-2} \geq 0 \rightarrow n \geq 2$
 $\cap \rightarrow n \geq 2$
 ب) $\sqrt{4-2n} \geq 0 \rightarrow 2 \geq n$ ارتباط
 $\sqrt{2n-5} \geq 0 \rightarrow n \geq \frac{5}{2}$
 $\cap \rightarrow \frac{5}{2} \leq n \leq 2$

5

$y = \sqrt{4n-a} + \sqrt{b-2n} \xrightarrow{n=2} 12-\frac{a}{4} = 0 \quad \frac{b}{4} - 4 = 0$
 $\frac{b}{a} = \frac{4}{12} = \frac{1}{3}$

6

الف) $y = \sqrt{\frac{n^2 - n - 4}{n^2 - 12n^2 + 34}} = \sqrt{\frac{(n-4)(n+1)}{4n^2 - 12n + 34}}$
 $\rightarrow \sqrt{\frac{(n-4)(n+1)}{(t-2)(t-9)}}$ $t = n^2 \rightarrow n = \pm 2, \pm 3$
 $D = (-\infty, -4) \cup (2, 3) \cup (3, +\infty)$
 باید ستاره رو بالای عدد بنویسی

$$\Rightarrow \sqrt{\frac{(m^2 - 2m^2 + 4m + 9)}{(m^2 + 2m^2 - 4m - 9)}} \xrightarrow{\text{نقطة}} \frac{m-1}{m+1} \xrightarrow{\text{نقطة}} 1-2-0+9 = 8$$

$$\xrightarrow{\text{نقطة}} -m+1 = 2-9 \checkmark$$

$$\frac{m^2 - 2m^2 + 4m + 9}{-m^2 + m^2} \quad \frac{m-1}{2^2 - m - 9} : (m-2)(m+2)$$

$$-2^2 - 4m + 9$$

$$-m^2 + m$$

$$-9m + 9$$

$$-9m + 9$$

$$\frac{m^2 + 2m^2 - 4m - 9}{m^2 + m^2} \quad \frac{m+1}{2^2 + m - 9} : (m+2)(m-2)$$

$$\frac{m^2 - 4m - 9}{m^2 + m}$$

$$-9m - 9$$

$$-9m - 9$$

$$\Rightarrow \sqrt{\frac{(\overset{-1}{m-1})(\overset{-2}{m-2})(\overset{-2}{m+2})}{(\underset{-1}{m+1})(\underset{-2}{m+2})(\underset{-2}{m-2})}} \geq 0$$

$\frac{-1}{m-1}$	$\frac{-2}{m-2}$	$\frac{-2}{m+2}$	$\frac{1}{m+1}$	$\frac{1}{m+2}$	$\frac{2}{m-2}$	$\frac{2}{m-2}$
+	-	+	-	+	-	+

$$D = (-\infty, -2) \cup [-2, -1) \cup [1, 2) \cup [2, +\infty)$$

$$\textcircled{9} \text{ الف) } y = \sqrt{r[m] - \varepsilon} \geq 0 \rightarrow r[m] \geq \varepsilon$$

$$[m] \geq 2 \quad D = [2, +\infty)$$

$$\Rightarrow y = \sqrt{r[m] - 0} \geq 0$$

$$r[m] - 0 \geq 0 \quad [m] \geq 18$$

$$[m] \geq 0 \rightarrow D = [0, +\infty)$$

15

$\Delta = \xi - \xi \times \xi = -12$
 $\oplus 0) \Delta < 0$

$\sqrt{\frac{a^2 - 4}{4}} \rightarrow a \neq 1$
 $\frac{a^2 + 4}{a^2 + 4} \rightarrow a \neq 1$
 $\frac{a^2 + 4}{a^2 + 4} \rightarrow a \neq 1$

$\Delta = \xi - \xi \times \xi = -12$
 $\oplus 0) \Delta < 0$

$\Delta = \xi - \xi \times \xi = -12$
 $\oplus 0) \Delta < 0$

$\sqrt{[a] - \xi \times \xi} \rightarrow [a] \geq \xi \rightarrow [\xi, +\infty)$
 $\sqrt{1 - [a]} \rightarrow [a] \leq 1 \rightarrow (-\infty, 1]$

$\emptyset$