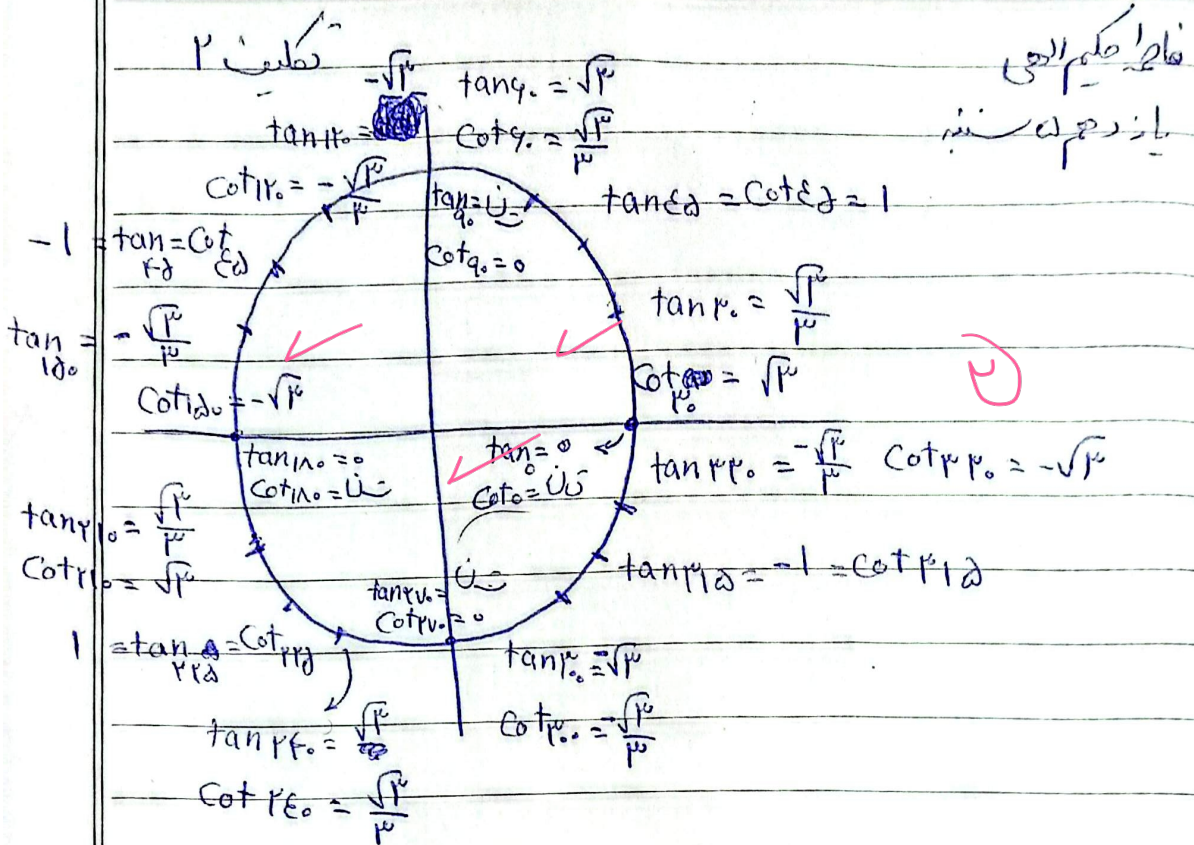




1/2

$$a^2 + fa = \frac{f}{a} + a + f \Rightarrow a^2 + a - f = 0 \quad (1)$$

$$f(1) = 1 + f = a \quad (2)$$

$$a = 1 \text{ و } f = 0$$

$$x = -f \Rightarrow f \times 9 - b = -9 + a \Rightarrow a + b = 1f \quad (3)$$

$$x^2 - fm^2 \neq 0 \Rightarrow x^2(n-1) \neq 0 \quad (4)$$

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

$$x^2 + fx^2 + fx + f \neq 0 \Rightarrow x^2 + fm^2 + x + f \neq 0$$

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

$$D_f = \mathbb{R} - \{-f\} \quad (5)$$

$$(x^2 + 1)(x + f) \neq 0$$

$$\text{الف.) } \frac{1}{r} + (-1) + 1x - 1 = \boxed{-\frac{1}{r}} \quad (r)$$

$$\text{ب.) } -(-\frac{\sqrt{r}}{r}) + \frac{\sqrt{r}}{r} - r(-\frac{\sqrt{r}}{r}) = \boxed{\frac{2\sqrt{r}}{r}}$$

$$\text{ج.) } -\frac{\sqrt{r}}{r} + r(\frac{\sqrt{r}}{r}) - r(-\frac{\sqrt{r}}{r}) = \boxed{\frac{r\sqrt{r}}{r}}$$

$$\text{د.) } 1 + 1 = \boxed{2}$$

$$\text{الف.) } \left. \begin{array}{l} x-1 \geq 0 \\ x \geq 1 \end{array} \right\} \begin{array}{l} x^2-1 \geq 0 \\ \frac{-1}{+} \frac{+1}{-} \end{array} \xrightarrow{\cap} D_f = [1, +\infty) \quad (4)$$

$$\text{ب.) } \left. \begin{array}{l} 4-rx \geq 0 \Rightarrow r \geq x \\ 4x-r \geq 0 \Rightarrow x \geq \frac{1}{r} \end{array} \right\} \xrightarrow{\cap} \frac{1}{r} \leq x \leq r. \quad D_f = \left[\frac{1}{r}, r\right]_{1/2}$$

$$\cancel{rx-a \geq 0} \quad \cancel{bx-r \geq 0}$$

$$\cancel{bx-r \geq 0} \quad \cancel{rx-a \geq 0}$$

$$4x-a \geq 0 \Rightarrow x \geq \frac{a}{4} \quad b-rx \geq 0 \Rightarrow \frac{b}{r} \geq x$$

$$\xrightarrow{\cap} \frac{b}{r} \geq x \geq \frac{a}{4} \Rightarrow \left. \begin{array}{l} a=1r \\ b=4 \end{array} \right\} \Rightarrow \frac{b}{a} = \frac{1}{r}$$

$$\text{الف.) } \frac{(x-r)(x+r)}{x^2-1^2x+1^2y} = \frac{(x-r)(x+r)}{(x^2-r)(x^2-9)} \quad \begin{array}{c} -r \quad -r \quad r \quad r \\ + \quad - \quad - \quad + \end{array}$$

$$(-r, r) \quad (-r, r) \quad (+r, +\infty) \cup (r, r) \cup (-\infty, -r)$$

