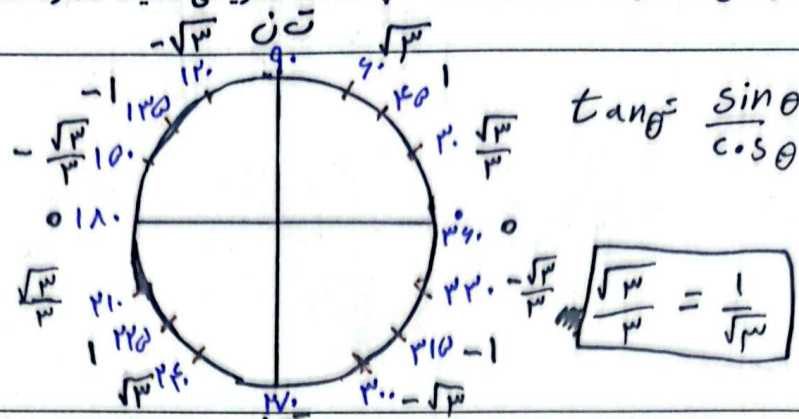


نام و نام خانوادگی امیرضا مؤذن پاسخنامه تشریحی تکلیف شماره ۲ کلاس یازدهم پسران شعبه A



$\sin \frac{\pi}{9} = \frac{1}{3}$ $\cos \frac{\pi}{9} = -1$ $\tan \frac{\pi}{9} = -1$ $\frac{1}{3} - 1 + 2(-1) = \boxed{-\frac{5}{3}}$ (الف)

$\cos \frac{2\pi}{9} = -\frac{\sqrt{3}}{3}$ $\sin \frac{2\pi}{9} = \frac{\sqrt{3}}{3}$ $\sin \frac{4\pi}{9} = -\frac{\sqrt{3}}{3}$ $\frac{\sqrt{3}}{3} + \frac{\sqrt{3}}{3} + \frac{\sqrt{3}}{3} = \boxed{\frac{5\sqrt{3}}{3}}$ (ب)

$\cos \frac{2\pi}{9} = -\frac{\sqrt{3}}{3}$ $\cos \frac{4\pi}{9} = \frac{\sqrt{3}}{3}$ $\tan \frac{5\pi}{9} = -\frac{\sqrt{3}}{3}$ $-\frac{\sqrt{3}}{3} + \sqrt{3} + \frac{2\sqrt{3}}{3} = \boxed{\frac{4\sqrt{3}}{3}}$ (ج)

$\sin \pi = 0$ $\cos(\sin \pi) = \cos 0 = 1$ $\cos \frac{\pi}{9} = \frac{1}{3}$ $1 + 1 = \boxed{2}$ (د)

$a = a \Rightarrow n^2 + 4n = 4n + a + 1$

$a = n \Rightarrow a^2 + 4a = 4a + a + 1$

$(a+1)(a-1) = 0$

$a = 1$
 ~~$a = -1$~~

$1^2 + 4 \times 1 = \boxed{5}$

$2x(-3) - b = a + 2x - 3$ در $x = -3$ دو برقرار نیست

$11 - b = a - 9$

$a + b = \boxed{20}$

$n^3 - 4n^2 \neq 0$ $n^3 - 4n^2 = n^2(n-4)$ (الف)
 $D = R - \{4, 0\}$ $n \neq 0$ $n \neq 4$

$2n^3 + 4n^2 + 2n + 4 \Rightarrow 2(n+2)(n^2+1) \neq 0$ (ب)
 $D = R - \{-2\}$ $n \neq -2$ ریشه ندارد

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

$$x^2 - 1 \geq 0$$

$$x - 2 \geq 0$$

$$x \leq -1 \text{ یا } x \geq 1$$

$$x \geq 2$$

$$D = [2, +\infty)$$

$$y = \frac{\sqrt{5-2x}}{\sqrt{4x-3}}$$

$$x - 2 \geq 0$$

$$5 - 2x \geq 0$$

$$D = \left(\frac{1}{2}, 2\right]$$

$$x \leq 2 \cap x > \frac{1}{2} = \frac{1}{2} < x \leq 2$$

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

$$\frac{b}{a} = \frac{4}{12} = \left[\frac{1}{3}\right]$$

$$y = \sqrt{4x - a} + \sqrt{b - 2x}$$

$$\frac{b}{2} = 2 \quad b = 4$$

$$\frac{a}{4} = 2 \quad a = 8$$

$$4x - a \geq 0 \quad b - 2x \geq 0$$

$$x \geq \frac{a}{4} \cap x \leq \frac{b}{2} = \frac{a}{4} \leq x \leq \frac{b}{2}$$

$$y = \sqrt{\frac{x^2 - x - 6}{x^2 - 13x^2 + 36}}$$

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

$$x^2 - 13x^2 + 36 = (x^2 - 4)(x^2 - 9)$$

$$= (x - 2)(x + 2)(x - 3)(x + 3)$$

$$(x - 2)(x + 2) \geq 0$$

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

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

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

$$D = (-\infty, -3) \cup [-2, -1) \cup [1, 2) \cup [3, +\infty)$$

$$y = \sqrt{2[x] - 4}$$

$$2[x] - 4 \geq 0$$

$$[x] \geq 2$$

$$x \geq 2$$

$$D = [2, +\infty)$$

$$y = \sqrt{2[x] - 0}$$

$$2[x] - 0 \geq 0$$

$$[x] \geq 0$$

$$[x] \geq 0$$

$$x \geq 0$$

$$D = [0, +\infty)$$

$$\frac{x+1}{x-2} \geq 0$$

$$x = -1$$

$$x = 2$$

$$\frac{-1}{1-2} = 1$$

$$x^2 + 2x + 4 = (x+1)^2 + 3$$

$$x \leq 3$$

$$D = [1, 3] \cup (3, 4]$$

$$[x] - 4 \geq 0$$

$$[x] \geq 4$$

$$[x] \leq 4$$

$$D = \emptyset$$

$$D = \emptyset$$