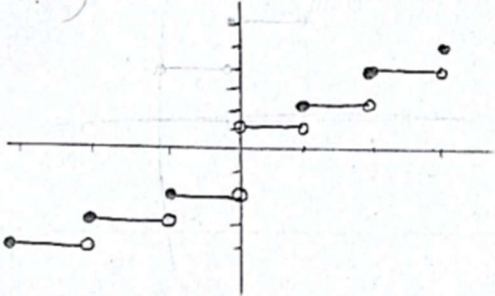
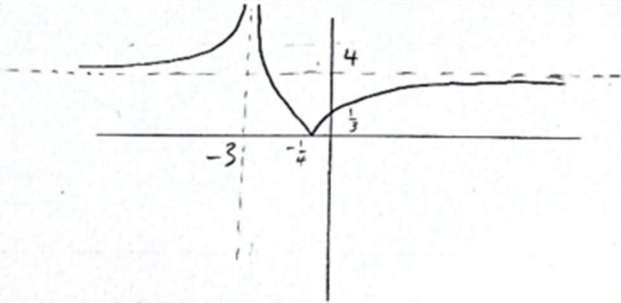
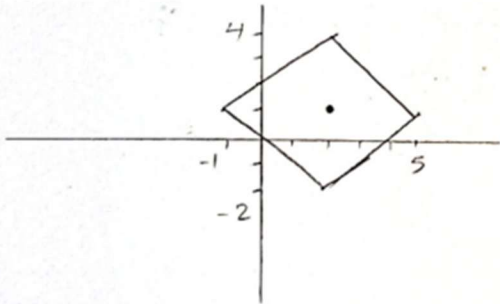


نام و نام خانوادگی امیر عباس سجادی پاسخنامه تشریحی تکلیف شماره کلاس 12-B

ب $0 \leq \sin^2 x \leq 1$ $\Rightarrow -1 \leq y \leq 1$ $R = [-1, 1]$	ب $-1 \leq \cos^3 x \leq 1$ $\Rightarrow -7 \leq y \leq -1$ $R = [-7, -1]$	1
		2
		3
A: (2, 1)	مین قدر مطلق و مثبت و من شکل مربع 	4
ا $x > 0 \Rightarrow t > 2$ $x + \frac{1}{x} = t \Rightarrow f = t + 2\sqrt{t}$ $y_{\min} \stackrel{t_{\min}=2}{=} 2 + 2\sqrt{2}$ $y_{\max} = +\infty$ $R = [2 + 2\sqrt{2}, +\infty)$	ب $y = -\sin^2 x + 2\sin x + 3$ $(\sin x)_{\max} = \frac{-b}{2a} = \frac{-2}{-2} = 1$ $y_{\max} = 4$ $y_{\min} \stackrel{\sin x = -1}{=} 0 \Rightarrow R = [0, 4]$	5

$$n \in \{1, 2, \dots, 9\}$$

$$\begin{aligned} S_{\text{sum}} &= 10 + 1(-\frac{1}{3}) + 10 + 2(-\frac{1}{3}) + \dots + 10 + 9(-\frac{1}{3}) \\ &= (9 \times 10) + (1+2+\dots+9)(-\frac{1}{3}) \\ &= 90 - \frac{45}{3} = 90 - 15 = 75 \end{aligned}$$

6

از بازه دامنه مشخص می شویم که زیر ادیکال «ج» 1

$$\begin{aligned} f(3) &= \sqrt{3b+c} = 1 \Rightarrow 3b+c=1 \\ f(2) &= \sqrt{2b+c} = 0 \Rightarrow 2b+c=0 \end{aligned} \quad \left. \begin{array}{l} b=1 \\ c=-2 \end{array} \right\}$$

7

$$g(x) = \sqrt{x^2+4} \rightarrow \begin{aligned} x^2+4 &\geq 4 \Rightarrow R_g = [2, +\infty) \\ \sqrt{x^2+4} &\geq 2 \end{aligned}$$

$$\begin{aligned} x+2 &\neq 0 \Rightarrow x \neq -2 \\ \Rightarrow a &= 2 \\ b &= -2 \end{aligned}$$

8

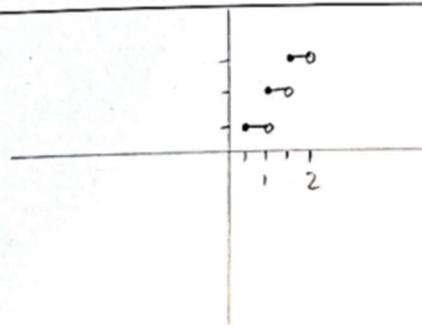
$$\begin{aligned} f(x) &= x(x-2) = x^2-2x \\ y_{\min} \stackrel{x=1}{=} 1-2 &= -1 \Rightarrow c = -1 \\ \Rightarrow \frac{a+b}{2c} &= \frac{-4}{-2} = 2 \Rightarrow f(2) = 0 \end{aligned}$$

$$\begin{aligned} y &= \sqrt[3]{(x-2)^3} = \sqrt[3]{x^3-6x^2+12x-8} \\ \Rightarrow a &= -6 \\ b &= 12 \end{aligned}$$

9

$$\begin{aligned} x \in [-6, 12] &\Rightarrow -8 \leq x-2 \leq 10 \\ \Rightarrow R &= [-8, 10] \end{aligned}$$

$$\begin{aligned} x \in [\frac{1}{2}, 1) &= 1 \\ x \in [1, \frac{3}{2}) &= 2 \\ x \in [\frac{3}{2}, 2) &= 3 \end{aligned}$$



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