

مسئله ۱۹ را

(الف) $f(t) = 2 \sin^2\left(t + \frac{\pi}{4}\right) - 1$ $-\frac{\pi}{4} \leq t \leq \frac{\pi}{4}$ $2 \sin^2(t) - 1 = -\cos(2t) \Rightarrow -1 \leq \cos(2t) \leq 1$ (۱)

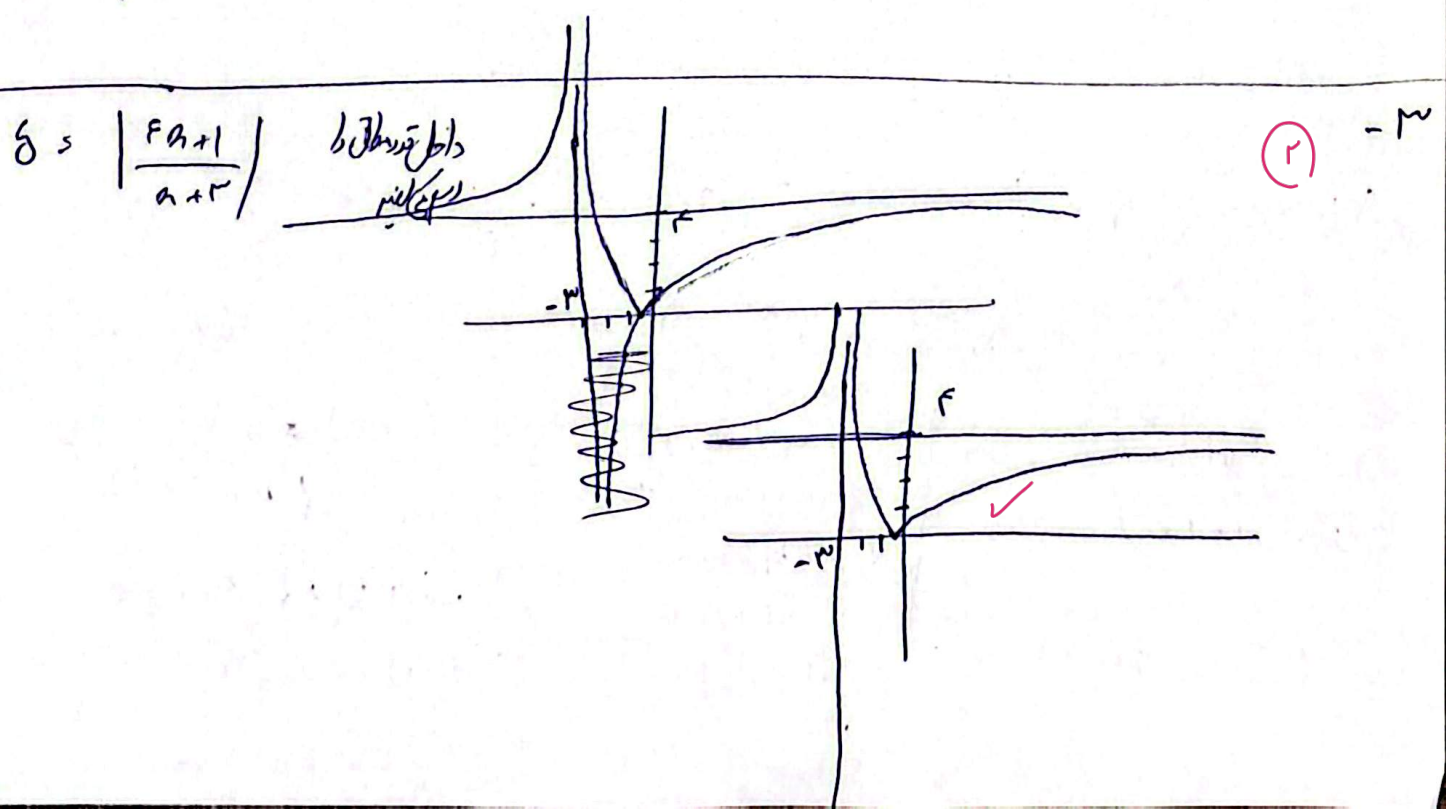
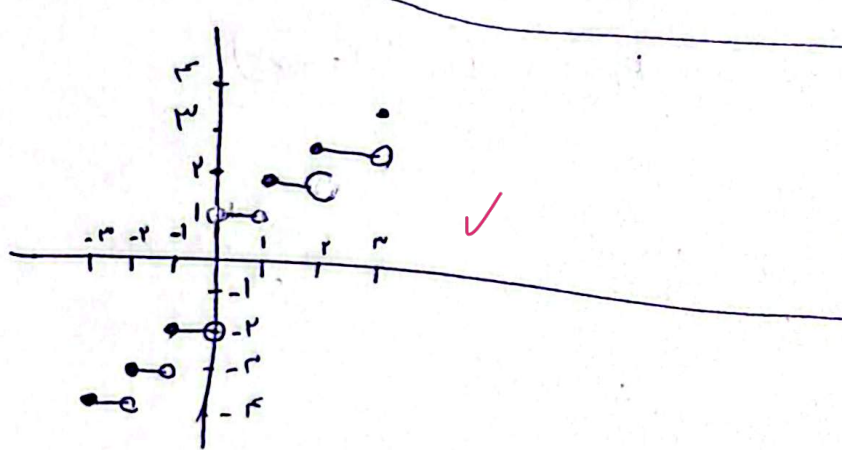
ب $g(t) = 2 \cos^2 t - 4$ $-\frac{\pi}{4} \leq t \leq \frac{\pi}{4}$ $-1 \leq 2 \sin^2 t - 1 \leq 1$ (۲)

$-1 \leq \cos^2 t \leq 1 \Rightarrow -3 \leq 2 \cos^2 t \leq 1$ $-4 \leq 2 \cos^2 t - 4 \leq -1$

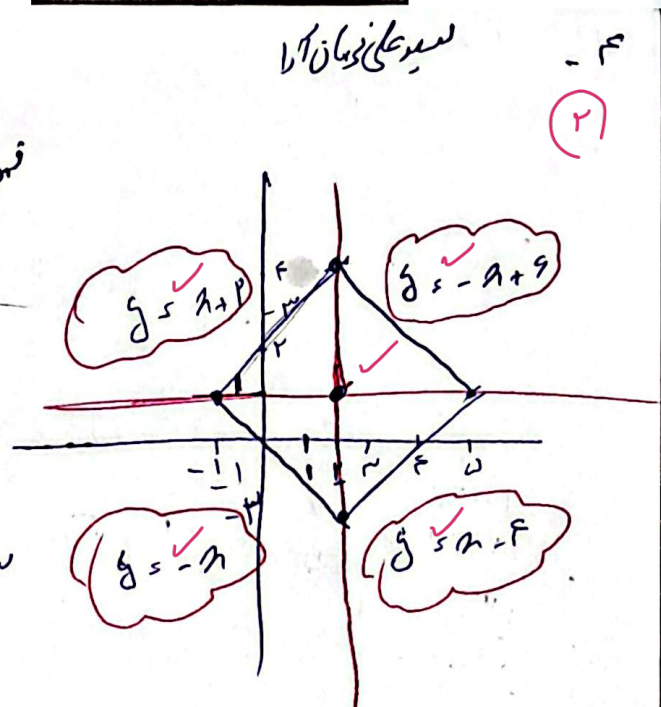
$\Rightarrow f(t) \in [-1, 1]$

$\Rightarrow g(t) \in [-4, -1]$

$(1) \rightarrow (1, 0)$ (2) (3)
 $(2, 1) = 1 + 1 = 2$
 $(3, 2) = 1 + 2 = 3$
 $(4, 3) = 1 + 3 = 4$
 $(5, 4) = 1 + 4 = 5$
 $(6, 5) = 1 + 5 = 6$
 $(7, 6) = 1 + 6 = 7$
 $(8, 7) = 1 + 7 = 8$
 $(9, 8) = 1 + 8 = 9$
 $(10, 9) = 1 + 9 = 10$



$W(|a-2|) + (|b-1|) = 3$
 $b-a=2$
 $W < 0 \Rightarrow$
 $2-a+b-1=3$
 $a+b=9$
 $W > 0 \Rightarrow$
 $a+b=0$
 $W < 0 \Rightarrow$
 $a+b=0$
 $W > 0 \Rightarrow$
 $a-2+1-b=3$
 $a-b=4$



ان) $f(a) = a + \frac{1}{a} + 2\sqrt{a + \frac{1}{a}}$

$a + \frac{1}{a} \geq 0 \Rightarrow a(a + \frac{1}{a}) : [2, +\infty) \Rightarrow R_{f(a)} = [2 + 2\sqrt{2}, +\infty)$

ب) $-\sin^2 \theta + 2\sin \theta + 3$

$\max \sin \theta = 1 \quad \theta = \frac{\pi}{2}$
 $\min \sin \theta = -1 \quad \theta = \frac{3\pi}{2}$

$\frac{-b}{2a} = 1 \quad \theta = \frac{\pi}{2}$

$\Rightarrow R_f = [0, 4]$

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

$f(1) + f(2) + f(3) + \dots + f(9) = -\frac{1}{10} (1 + 2 + 3 + \dots + 9) + 9 \times 1 = -\frac{45}{10} + 9 = \frac{35}{2}$

$= \frac{40}{2} + 9 = 29$

va

$f(a) = \sqrt{a^2 + b^2} - c$

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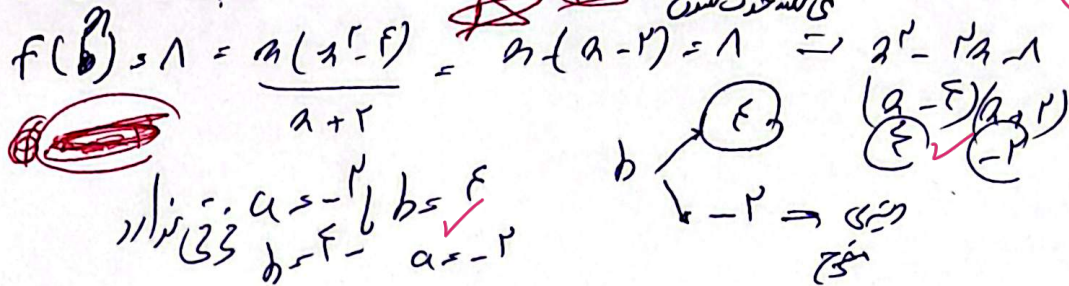
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$1, \sqrt{a}$

$$f(a) = \frac{a^2 - 1}{a + 1} = \frac{(a+1)(a-1)}{a+1} = a-1$$

[illegible]

$$f\left(\frac{1}{-1}\right) = f(-1)$$

$f(-1) = \frac{1}{1} f(1)$

چون نام خطیہ زری
وہی اسم باید خطیہ کل

سنگ ۱ - داره سی
(۲) - پرده تیره داره
پرنده سی

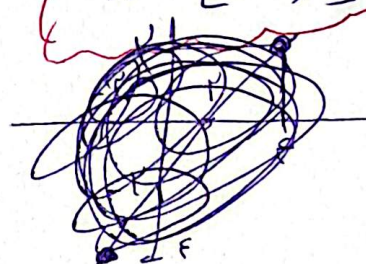
مسئله ۱ - داده‌های
(۲-۱) مربوط به داده‌های
برخی می‌باشد

~~9/2/20~~

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دایره $[-6, 12]$ ✓

$$13. = [-1, 1c]$$



✓

$$[1, 0, 1] \Rightarrow 1 + 1 = 2$$

سید علی خاں آغا

۷- با توجه به دامنه، زیر رادیکال یک خط با شیب مثبت بوده یعنی $a=0$ است و نقطه $(2,0)$ هم در معادله خط صدق میکند...

$$\begin{cases} (2,0) \rightarrow 2b+c=0 \\ (3,1) \rightarrow 3b+c=1 \end{cases} \rightarrow b=1, c=-2$$

$$g(x) = \sqrt{x^2+4} \rightarrow \text{ext} \Big|_4^0 \Rightarrow R_g = \sqrt{[4, +\infty)} = [2, +\infty)$$