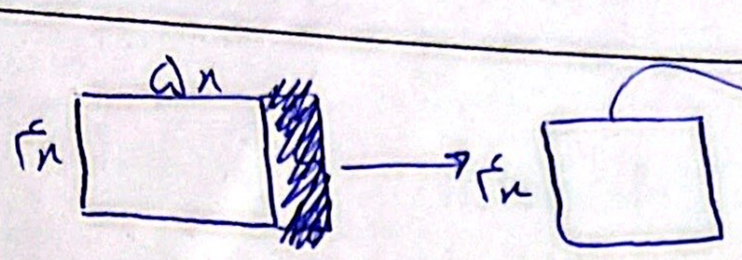
۲۰ آفرین!

نام و نام خانوادگی ..آرمین میرقلی.. پاسخنامه تشریحی تکلیف شماره ..۱۸.. کلاس ..یازدهم ریاضی B..



$z = 2(\sqrt{5}+1)x$

$\frac{S_2}{S_1} = \frac{2(\sqrt{5}+1)x \times 4x}{5 \times 20 \times 2} = .14(\sqrt{5}+1)$ ✓

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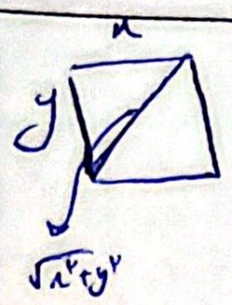

$\rightarrow \frac{\sqrt{x^2+y^2}}{x} = \frac{\sqrt{5}+1}{2}$

$\frac{x^2+y^2}{x^2} = \frac{6+2\sqrt{5}}{4} = \frac{3+\sqrt{5}}{2}$

$1+\frac{y^2}{x^2} = \frac{3+\sqrt{5}}{2} \rightarrow \frac{y^2}{x^2} = \frac{1+\sqrt{5}}{2}$

$\frac{x^2}{y^2} = \frac{2}{1+\sqrt{5}} \times \frac{2(\sqrt{5}-1)}{2(2)} = \frac{\sqrt{5}-1}{2}$ ✓

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$\sqrt{2a^2+6a+3a} = 2$

$\sqrt{2a^2+6a} = 2-3a \rightarrow 2-3a \geq 0$

$\frac{2}{3} \geq a$

$2a^2+6a = 4-12a+9a^2$

$7a^2-18a+6 \geq 0$

$a^2-18a+48 \geq 0$

$(a-16)(a-2) \geq 0$

$a \leq 2$ یا $a \geq \frac{3}{7}$ ✓

$\rightarrow \frac{a+1}{a} = 1+\frac{1}{a}$

$1+\frac{7}{2} = 4.5$ ✓

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$\frac{\sqrt{x+1}}{\sqrt{x-1}+3} - \frac{\sqrt{x+1}}{3-\sqrt{x+1}} = \frac{x-1}{\sqrt{x-1}}$

$\rightarrow D = (1,+\infty) - \{10\}$

$\sqrt{x+1}\left(\frac{3-\sqrt{x+1}-\sqrt{x-1}+3}{9-(x+1)}\right) = \sqrt{x-1}$

$\sqrt{x+1}\left(\frac{2\sqrt{x+1}}{x-10}\right) = \sqrt{x-1}$

$x \neq 1 \rightarrow 2\sqrt{x+1} = x-10 \Rightarrow x \geq 10$

$4x+4 = x^2-20x+100$

$x^2-24x+96 = 0 \rightarrow x = \frac{24 \pm \sqrt{192}}{2} = 12 \pm 4\sqrt{3}$

$x \geq 10$ ✓

$x = 12+4\sqrt{3}$ ✓ تنها جواب

$x = 12-4\sqrt{3}$ ✗ قابل قبول نیست

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$\frac{1}{x^2} + \frac{1}{(1-x)^2} = \frac{19}{9}$

$\frac{2x^2-2x+1}{(x-1)^2+x^2} = \frac{19}{9}$

$\left(\frac{x^2-x}{t}\right)$

$\frac{2t+1}{t^2} = \frac{19}{9} \rightarrow \frac{t^2+2t+1}{t^2} = \frac{169}{9} \rightarrow \frac{t+1}{t} = \pm\frac{13}{3}$

$\frac{1}{t} = \frac{10}{3}$ ✓ $\quad t = \frac{3}{10}$

$\frac{1}{t} = -\frac{16}{3}$ ✓ $\quad t = -\frac{3}{16}$

$x^2-x-\frac{3}{10} = 0 \xrightarrow{\Delta} S = -\frac{b}{a} = 1$

$x^2-x+\frac{3}{16} = 0 \xrightarrow{\Delta} S = -\frac{b}{a} = 1$

$S = 2$ ✓

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$\sqrt{x+\sqrt{-x^3+5x^2+24x-100}}+\sqrt{x^2+\sqrt{-x^2+6x-8}}=x+2$

$-x^2(x-5)+24(x-5)$

$-(x-5)(x^2-24)$

$-(x-5)(x-2\sqrt{6})(x+2\sqrt{6})$

	$-2\sqrt{6}$		$2\sqrt{6}$	
	+	−	+	−

(1)

$-(x-4)(x-2)$

	2		4	
	−	+	+	−

(2)

$1\cap 2 \to x=4$

$\sqrt{4}+\sqrt{16}=6$ ✓ قبول

(2)

$y=|x+2|+|x-1|$

$3y+x=17$

$x\geq 1$

$2x+1+x-1=3x$

$3x=15 \to x=5$ ✗

$-2\leq x<1$

$2x+1-x+1=3$

$3=3$ ✓

$x<-2$

$-2x-1+x-1=-3x$

$-3x-3+x=17$

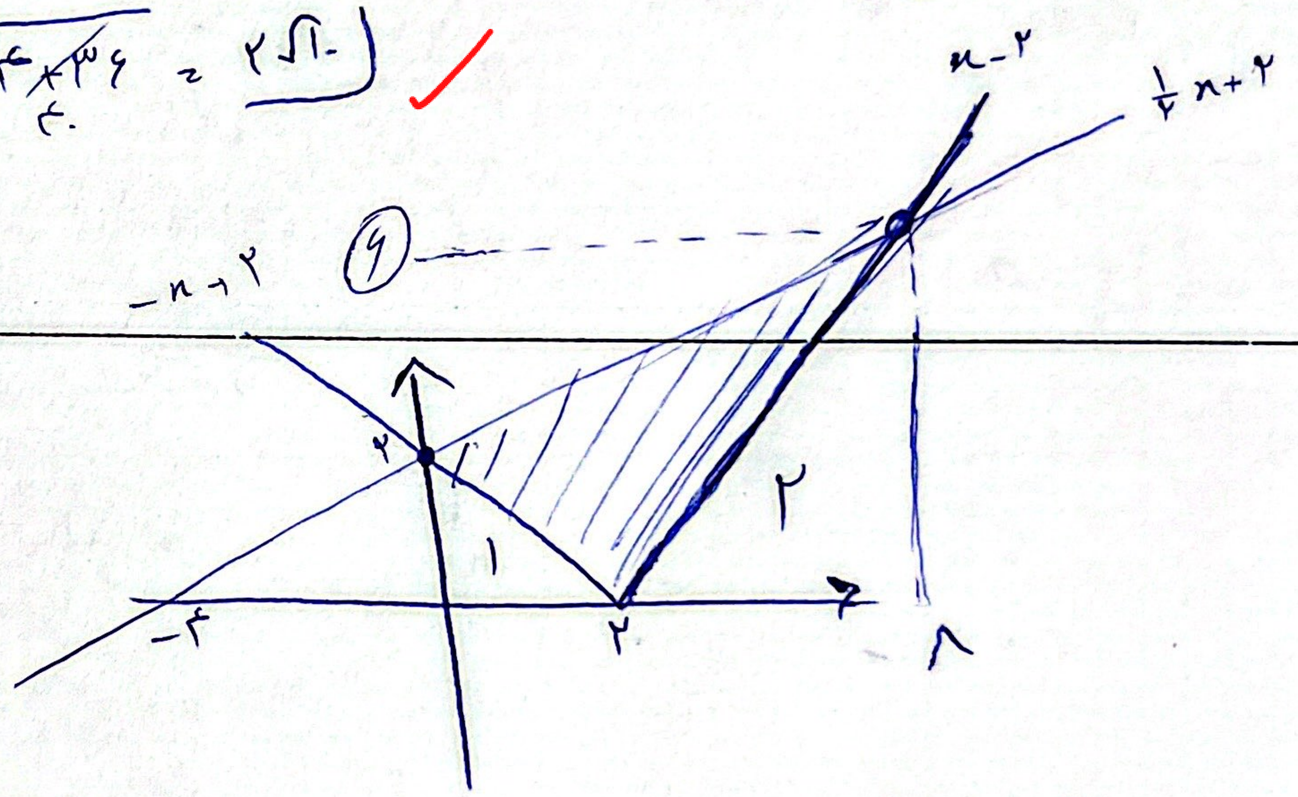
$-2x=20 \to x=-10$ ✓

(2)

$A(2,5)$

$B(-4,7)$

$\to |AB|=\sqrt{36+4}=2\sqrt{10}$ ✓



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$y=\sqrt{x^2-4x+4}=|x-2|$

$(x-2)^2$

$y=\frac{1}{2}x+2$

$S_{\text{ماشور}}=S_{\square}-S_1-S_2$

$\frac{18\times 8}{2}-\frac{2\times 2}{2}-\frac{6\times 6}{2}=12$ ✓

ساعت x ← روز 20

ساعت $x+9$ ← فرهاد

$\to \frac{1}{x}+\frac{1}{x+9}=\frac{1}{20}$

$20(x+9)+20x=x^2+9x$

$x^2-31x-180=0$

$(x-36)(x+5)=0$

$x=36$ ✓ ساعت ، $\frac{36}{24}=1.5$ روز ✓

(2)

۳) $\frac{1}{\sqrt{۲-x}+۲} - \frac{1}{۲-\sqrt{۲-x}} = \frac{۲-x}{۵\sqrt{۲-x}}$

$x \neq ۲$

$$\frac{۲-\sqrt{۲-x}-۲\sqrt{۲-x}-(۲-x)}{۴-(۲-x)} = \frac{\sqrt{۲-x}}{۵}$$

$$\frac{x+۲-۳\sqrt{۲-x}}{x+۲} = \frac{\sqrt{۲-x}}{۵}$$

$$x+۲ = -۱۰$$

$$x = -۱۲$$

→ ✓ قابل قبول است