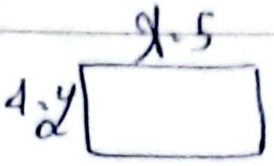
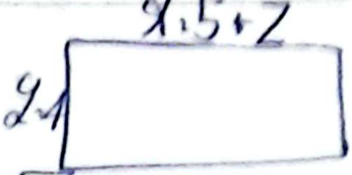
نام و نام خانوادگی: محمد مهدی [illegible] — پاسخنامه تشریحی تکلیف شماره 18 کلاس ریاضی یازدهم B

$\frac{x}{y}=\frac{5}{4}$ $\quad x=5,\ y=4$



مستطیل طلایی: $x=5+z,\ y=4$



$\frac{5+z}{4}=\frac{\sqrt5+1}{2} \to 10+2z=4\sqrt5+4 \to z=2\sqrt5-3$ ۱

$\frac{2+2\sqrt5}{4}=\frac{x}{y} \to \frac{x'}{y}=\frac{8\sqrt5+8}{20}=\boxed{\frac{2\sqrt5+2}{5}}$

$\to \frac{\sqrt{x^2+y^2}}{x}=\frac{\sqrt5+1}{2} \to \sqrt5x+x=2\sqrt{x^2+y^2}$

$5x^2+x^2+2\sqrt5x^2=4x^2+4y^2 \to 2x^2+2\sqrt5x^2=4y^2 \to$ ۲

$x^2+\sqrt5x^2=2y^2 \to (1+\sqrt5)x^2=2y^2 \to \boxed{\frac{x^2}{y^2}=\frac{2}{1+\sqrt5}}$

$3a+\sqrt{2a^2+4a}=2 \to 3a-2=-\sqrt{2a^2+4a} \to$

$9a^2+4-12a=2a^2+4a \to 7a^2-16a+4=0 \to \Delta=144$ ۳

$\frac{16\pm12}{14}=2,\ \frac{4}{14} \to \frac{a+1}{a}\quad a=2:\ \frac{3}{2}$ — در معادله صدق نمی‌کند ✗

$a=\frac{2}{7} \to \frac{\frac{9}{7}}{\frac{2}{7}}=\frac{9}{2}=4/5$

$\frac{\sqrt{x+1}}{\sqrt{x-1}+3}-\frac{\sqrt{x+1}}{3-\sqrt{x-1}}=\frac{x-1}{\sqrt{x-1}} \to \frac{3\sqrt{x+1}-\sqrt{x^2-1}-\sqrt{x^2-1}-3\sqrt{x+1}}{9-x+1}=\frac{x-1}{\sqrt{x-1}}$

$\frac{-2\sqrt{x^2-1}}{9-x+1}=\frac{x-1}{\sqrt{x-1}} \xrightarrow{\div\sqrt{x-1}} \frac{-2\sqrt{x+1}}{9-x+1}=\frac{x-1}{x-1}$ ۴

$-2\sqrt{x+1}=10-x$

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

$x^2-24x+96=0 \to$ دو ریشه دارد

$\frac{1}{\sqrt{2-x}+2}-\frac{1}{2-\sqrt{2-x}}=\frac{2-x}{5\sqrt{2-x}} \to \frac{-2\sqrt{2-x}}{2+x}=\frac{2-x}{5\sqrt{2-x}}\quad t=2-x$

$\frac{-2\sqrt t}{4-t}=\frac{t}{5\sqrt t} \to -10t=4t-t^2 \to t^2-14t=0$ ۵

$t=0,\ 14$

$2-x=0 \to x=2 \to (+)$

$2-x=14 \to x=-12 \to (-)$

ریشه صحیح را [illegible] می‌کند.

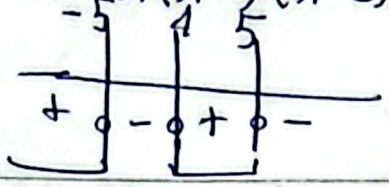
$\frac{1}{x^2}+\frac{t}{(1-x)^2}=\frac{160}{9} \longrightarrow \frac{2x^2-2x+1}{(x(x-1))^2}=\frac{2(x^2-x)+1}{(x(x-1))^2}=\frac{160}{9} \xrightarrow{x^2-x=t}$

$\frac{2t+1}{t^2}=\frac{160}{9} \xrightarrow{+1} \frac{t^2+2t+1}{t^2}=\frac{169}{9} \xrightarrow{\sqrt{\ }} \frac{t+1}{t}=\pm\frac{13}{3}$

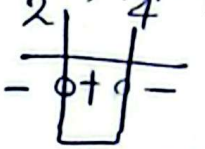
$t=\frac{3}{10},-\frac{3}{16} \Rightarrow \begin{matrix} x^2-x=\frac{3}{10} \to S=1 \\ x^2-x=-\frac{3}{16} \to S=1 \end{matrix}$ — 2

$\sqrt{x+\sqrt{-x^3+4x^2+25x+100}}+\sqrt{x^2+\sqrt{-x^2+6x-8}}=x+2$

$(x+5)(x-4)(x-5)$



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

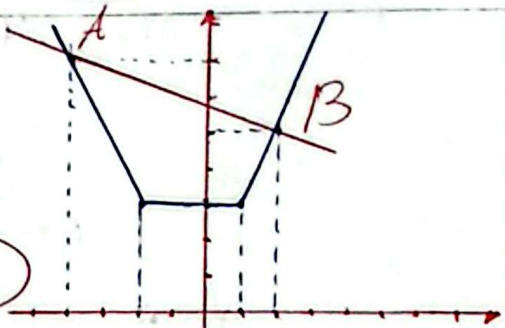


$= \{4\}$

$3y+x=17 / y=|x+2|+|x-1|$

$A=\binom{-4}{7}\ B=\binom{2}{5}$

$AB=\sqrt{(2+4)^2+(5-7)^2}=\sqrt{40}=2\sqrt{10}$



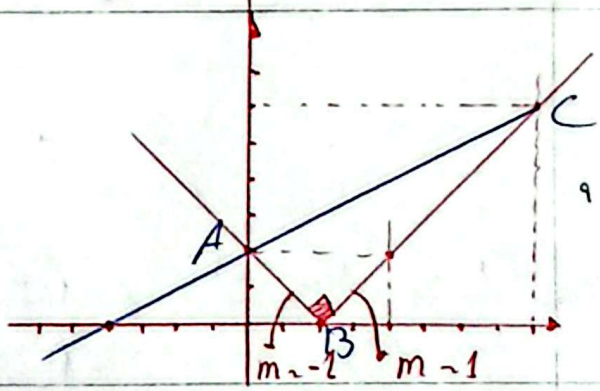
$y=\frac{1}{2}x+2 / y=\sqrt{x^2-4x+4}$

$y=|x-2|$

$AB=\sqrt{4+4}=2\sqrt{2}$

$BC=\sqrt{36+36}=6\sqrt{2}$

$S_{\hat{ABC}}=\frac{2\sqrt{2}\times 6\sqrt{2}}{2}=12$



B = سرعة → x

F = سرعة → $x+9$

$\frac{1}{x}+\frac{1}{x+9}=\frac{1}{20} \longrightarrow \frac{x+x+9}{x^2+9x}=\frac{1}{20}$

$40x+180=x^2+9x \longrightarrow x^2-49x-180=0$

$x=36$ B

$x+9=45$ F