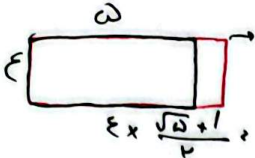
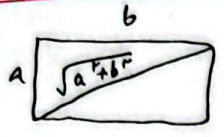
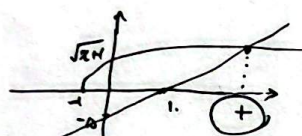


~~حل المسألة الأولى: لدينا مثلث قائم الزاوية بـ، حيث أن $\angle A = 60^\circ$ ، $\angle B = 90^\circ$ ، $\angle C = 30^\circ$. نريد إيجاد طول الضلعين a و b إذا علمنا أن $c = 10$.~~

١)  $\omega \times \frac{\sqrt{\omega+1}}{2} = 2(\sqrt{\omega+1})$ $\frac{2\sqrt{\omega+1}}{2\sqrt{\omega+1}} = \frac{2(\sqrt{\omega+1}) \times \varepsilon}{\omega \times \varepsilon} = 0, \varepsilon(\sqrt{\omega+1})$ (5) 19, 175

٢)  $\frac{\sqrt{a^2+b^2}}{b} = \frac{\sqrt{\omega+1}}{2} \xrightarrow{\text{نضرب في } b} \frac{a^2+b^2}{b^2} = \frac{4+2\sqrt{\omega}}{4}$
 $\rightarrow \frac{a^2}{b^2} + 1 = \frac{1+\sqrt{\omega}}{2} \rightarrow \frac{a^2}{b^2} = \frac{1+\sqrt{\omega}}{2}$
 $\rightarrow \frac{b^2}{a^2} = \frac{2}{1+\sqrt{\omega}}$ (5)

٣) $\sqrt{2a^2+4a} = 2-3a \xrightarrow{\text{نربّع الطرفين}} 2a^2+4a = 4-12a+9a^2 \rightarrow \sqrt{a^2-14a+4} = 0$
 $\frac{a+1}{a} = \frac{4}{2} = 2, \omega \leftarrow \begin{cases} \sqrt{a^2-14a+4} = 0 \\ a = 2, \frac{4}{2} \end{cases}$ (5)

٤) $\frac{3\sqrt{x+1} - \sqrt{x+1}\sqrt{x-1} - 3\sqrt{x+1} - \sqrt{x+1}\sqrt{x-1}}{4-(x-1)} \Rightarrow -2\sqrt{x+1} = 1-x$
 $\rightarrow$ يك، $\frac{2}{3}$ ، $\frac{1}{3}$ (5)

٥) $\frac{2-\sqrt{2-x} - 2-\sqrt{2-x}}{4-(2-x)} = \frac{-2\sqrt{2-x}}{2+x} = \frac{\sqrt{2-x}}{\omega} \rightarrow -1 = 2+x \rightarrow x = -12$
 $x = -12$ ریشه منتهی است پس معادله هیچ ریشه منتهی ندارد $\left\{ \frac{2}{x}, -\frac{12}{x} \right\}$ (5) 1, 175

٦) $\frac{(x-1)^2+x^2}{(x^2-x)^2} = \frac{14}{9} \xrightarrow{x^2-x=z} \frac{z^2+1}{z^2} = \frac{14}{9} \rightarrow \frac{z^2+1}{z^2} = \frac{14}{9} \xrightarrow{\text{ضرب}}$
 $\frac{z+1}{z} = \pm \frac{13}{9} \begin{cases} z = \frac{13}{9} \\ z = -\frac{13}{9} \end{cases}$
 $x^2-x-\frac{13}{9} = 0 \xrightarrow{\Delta} S=1$
 $x^2-x+\frac{13}{9} = 0 \xrightarrow{\Delta} S=1$ $S_{\text{جواب}} = 2$ (5)

٧) $-x^2+4x+2\omega x+1 \geq 0 \rightarrow -x^2(x-\varepsilon)+2\omega(x-\varepsilon) \geq 0 \rightarrow (x-\varepsilon)(-x^2+2\omega) \geq 0$
 $\rightarrow (x-\varepsilon)(\omega+x)(\omega-x) \geq 0 \rightarrow \begin{matrix} -\omega & \varepsilon & \omega \\ + & - & + \end{matrix} \Rightarrow x \leq -\omega \leq \varepsilon \leq x \leq \omega$
 $-x^2+4x-1 \geq 0 \rightarrow (x-2)(x-1) \geq 0 \rightarrow \begin{matrix} 2 & 1 \\ - & + \end{matrix} \rightarrow 1 \leq x \leq 2$ $\rightarrow \{ \varepsilon \}$ (5)

① $y_1 = |x+2| + |x-1|$

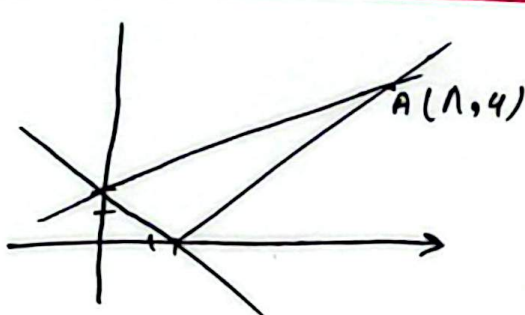
$$\begin{cases} -2x-1 & x \leq -2 \\ 1 & -2 < x \leq 1 \\ 2x+1 & 1 < x \end{cases}$$

⑤ $y_2 = 14 - x \rightarrow y_2 = -\frac{1}{\mu}x + \frac{14}{\mu}$

$y_1 = y_2$

$$\begin{cases} -2x-1 = -\frac{1}{\mu}x + \frac{14}{\mu} \quad (x \leq -2) \rightarrow x = -\varepsilon \rightarrow y = 14 \\ 1 = -\frac{1}{\mu}x + \frac{14}{\mu} \quad (-2 < x \leq 1) \rightarrow x = 1\varepsilon \rightarrow y = 13 \\ 2x+1 = -\frac{1}{\mu}x + \frac{14}{\mu} \quad (1 < x) \rightarrow x = 2 \rightarrow y = 12 \end{cases}$$

$|AB| = \sqrt{4^2 + 2^2} = \sqrt{20} = 2\sqrt{5}$

④  $x - 2 = \frac{1}{\mu}x + 7 \rightarrow \frac{1}{\mu}x = \varepsilon$
 $\rightarrow x = 1$

$\varepsilon \left\{ \begin{matrix} 2 \\ 1 \\ 1 \\ 2 \end{matrix} \right\} \mu 1$ $S = \frac{2 \cdot 1 - \varepsilon}{2} = 1$

① $x = 9$: مورد
 x : مرهه
دوستان

$\frac{1}{x-9} + \frac{1}{x} = \frac{1}{\mu} \rightarrow \frac{x+x-9}{x^2-9x} = \frac{1}{\mu}$
 $\rightarrow \frac{2x-9}{x^2-9x} = \frac{1}{\mu} \rightarrow x^2 - 9x = \varepsilon \cdot x - 11$

$x^2 - \varepsilon 9x + 11 = 0$
 $x = \frac{\varepsilon 9 \pm \sqrt{\varepsilon^2 81 - 44}}{2}$
 $x = \varepsilon h x$
 $x = \varepsilon \omega h$
 $x = \varepsilon h x$
 $x = \varepsilon \omega h$
 $x = \varepsilon h x$
 $x = \varepsilon \omega h$