

برسم بیفتنه روش

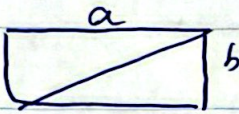
عسل خامری

سوال ←

$$\frac{\text{ضرایب}}{\text{اربع}} = \frac{((1+\sqrt{5}) \times 5) \times 5}{5 \times 5 \times 5} = \frac{2+2\sqrt{5}}{5} = \frac{2}{5} + \frac{2}{5}\sqrt{5}$$

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

سوال ←



$\sqrt{a^2+b^2} = 1$ (نقشه)

$$\frac{\sqrt{a^2+b^2}}{a} = \frac{1+\sqrt{5}}{2}$$

$$\Rightarrow \frac{b^2}{a^2} = \frac{2+2\sqrt{5}}{5} \Rightarrow \left(\frac{b}{a}\right)^2 = \frac{2+2\sqrt{5}}{5} = \frac{2(1+\sqrt{5})}{5}$$

$$\left(\frac{a}{b}\right)^2 = \frac{5}{2(1+\sqrt{5})}$$

سوال ←

$$ra + \sqrt{ra+8a} = 2 \rightarrow \sqrt{ra+8a} = 2-ra \Rightarrow ra^2+8a=4a^2-4ra+4$$

$$\rightarrow va^2-9a+4 \quad a=rx$$

$$a = \frac{r}{v} \Rightarrow \frac{a}{a} = 1 + \frac{1}{a} = 1 + \frac{1}{\frac{r}{v}} = 1 + \frac{v}{r}$$

سوال ←

$$\frac{1}{\sqrt{2-x}+2} - \frac{1}{2-\sqrt{2-x}} = \frac{2-x}{5\sqrt{2-x}} \Rightarrow \frac{2-\sqrt{2-x}-\sqrt{2-x}-2}{(2+\sqrt{2-x})(2-\sqrt{2-x})} = \frac{2-x}{5\sqrt{2-x}}$$

$$\rightarrow \frac{-2\sqrt{2-x}}{4-(2-x)} = \frac{2-x}{5\sqrt{2-x}} \rightarrow -1 \cdot (2-x) = (2+x)(2-x) \rightarrow x^2+10x-24$$

$$\rightarrow (x+12)(x-2) \rightarrow x=2$$

دارد در این معادله جواب دارد $x=2$ خارج عبارت راضی من است

سوال ←

$$\frac{1}{x^2} + \frac{1}{(1-x)^2} = \frac{14}{9} \rightarrow \frac{(1-x)^2 + x^2}{x^2(1-x)^2} = \frac{14}{9} \Rightarrow \frac{2x^2-2x+1}{(x-x^2)^2} = \frac{14}{9}$$

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$$\frac{2x^2-2x+1}{(x-x^2)^2} = \frac{14}{9}$$

$\sqrt{1+\frac{(-2\sqrt{u-1})}{9-u+1}} = \frac{(\sqrt{u-1})}{\sqrt{u-1}}$
 $\rightarrow 2\sqrt{u-1} = u-1$
 $\rightarrow u^2-2u+1=0$
 $\rightarrow u=1 \pm \sqrt{0}$
 $\rightarrow u=1$

Scanned with

$$\Rightarrow \frac{2(x^2 - x) + 1}{(x^2 - x)^2} = \frac{14 \cdot \frac{x^2 - x = t}{t+1}}{9} = \frac{14}{9} \rightarrow 14 \cdot t = 18 + t^2$$

$$\rightarrow 14 \cdot t = 18 + t^2 \rightarrow t = \frac{18 \pm \sqrt{144 - 4 \cdot 1 \cdot 14}}{2 \cdot 1} \rightarrow t = -\frac{3}{14} \rightarrow x^2 - x + \frac{3}{14} = 0$$

$$\rightarrow 1 + 1 = \frac{2}{5}$$

$$\sqrt{x} + \sqrt{-x^2 + 4x + 1} = 0 \rightarrow \sqrt{x^2 + 4x + 1} = x + 2 \leftarrow \text{سران}$$

$$-x^2 + 4x + 1 \geq 0 \rightarrow x^2 - 4x - 1 \leq 0 \Rightarrow (x-2)(x-1) \leq 0 \Rightarrow 1 \leq x \leq 2 \quad \text{I}$$

$$-x^2 + (x^2 + 4x - 1) \geq 0 \rightarrow x^2(-x+4) + 2(x-1) \geq 0 \Rightarrow (x-1)(x+2) \geq 0 \Rightarrow x \leq -2 \text{ or } x \geq 1 \quad \text{II}$$

$$\rightarrow (x-1)(x+2) \geq 0 \rightarrow x \leq -2 \text{ or } x \geq 1$$

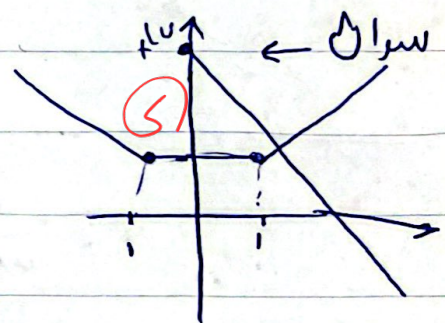
$$\text{II} \cap \text{I} \rightarrow x = 1 \Rightarrow \sqrt{1} + \sqrt{0} + \sqrt{14 + \sqrt{0}} = 1 + 2 = 3 = 1 + 2 \quad \text{I}$$

$$x = 1$$

$$y = |x+2| + |x-1|, \quad 3y + x = 14$$

$$A(2, 0) \quad B(-1, 5)$$

$$AB = \sqrt{2 - (-1)^2 + (0 - 5)^2} = 5\sqrt{2}$$



$$y = \frac{1}{3}x + \frac{14}{3} \Rightarrow \frac{x}{3} = \frac{14}{3} - y$$

$$|x-2| = \frac{1}{3}x + \frac{14}{3} \rightarrow A(0, 2) \quad B(1, 4) \quad AB = 2\sqrt{2} \quad BC = 4\sqrt{2}$$

$$\frac{1}{x} = \frac{1}{x+9} \Rightarrow \frac{1}{x+9} = \frac{1}{x} \Rightarrow \frac{1}{x+9} = \frac{1}{x} \Rightarrow \frac{1}{x+9} = \frac{1}{x}$$

$$\rightarrow \frac{1}{x+9} = \frac{1}{x} \rightarrow 1 \cdot x + 1 \cdot 9 = x^2 + 9x \Rightarrow x^2 - 31x - 1 \cdot 9 = 0$$

$$x(x-31) = 1 \cdot 9 \Rightarrow x = 31 \text{ or } x = -1$$