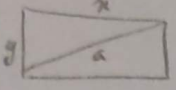


نام و نام خانوادگی: پاسخنامه تشریحی تکلیف شماره ۱۸۰۰ کلاس: تاریخ:

$$\frac{x}{y} = \frac{a}{t} \Rightarrow xy = \frac{a}{t} y^2 \quad \frac{x+b}{y} = \frac{1+\sqrt{a}}{t} = \frac{x}{y} + \frac{b}{y} = \frac{1+\sqrt{a}}{t}$$

$$\Rightarrow \frac{b}{y} = \frac{1+\sqrt{a}-a}{t} = \frac{1+\sqrt{a}-a}{t} \quad s' = by = \frac{1+\sqrt{a}-a}{t} y^2 \quad s_t = s + s' =$$

$$y^2 \left(\frac{1+\sqrt{a}-a}{t} + \frac{a}{t} \right) = \frac{1+\sqrt{a}-a+a}{t} y^2 = \frac{1+\sqrt{a}}{t} y^2 \quad \frac{s_t}{s} = \frac{\frac{1+\sqrt{a}}{t} y^2}{\frac{a}{t} y^2} = \frac{1+\sqrt{a}}{a} \quad \checkmark$$



$$a = \sqrt{x^2 + y^2} \quad \frac{\sqrt{x^2 + y^2}}{x} = \frac{1+\sqrt{a}}{t} \quad x^2 + y^2 = \frac{(1+\sqrt{a})^2}{t^2} x^2$$

$$x^2 - y^2 = \frac{1+\sqrt{a}+2\sqrt{a}+a}{t^2} x^2 \quad y^2 = x^2 \left(\frac{1+\sqrt{a}}{t} - 1 \right) = \frac{1+\sqrt{a}-t}{t} x^2$$

$$\Rightarrow \frac{x^2}{y^2} = \frac{x^2}{\frac{1+\sqrt{a}-t}{t} x^2} = \frac{t}{1+\sqrt{a}-t} \quad \checkmark$$

در هیچ مستطیلی نیست این نسبت کوچکتر از ۱ است اما چون طول بزرگتر از عرض است اینگونه نمی تواند باشد.

$$2a - t = -\sqrt{2a^2 - ta} \quad 4a^2 + t - 12a = 2a^2 - ta$$

$$\sqrt{4a^2 - 14a + t} = 0 \Rightarrow a^2 - 14a + 4a = 0 \quad (a - 12)(a - t) = 0$$

$$a = \frac{1+t}{2} = \text{غقات} \quad a = \frac{t}{2} \quad \text{در هر دو زیر رادیکال ۰}$$

$$a = t \quad \frac{a+1}{a} = \frac{t}{t} = 1 \quad \checkmark \quad \sqrt{2a^2 + 4a} = 2 - 2a$$

$$a = \frac{t}{2} \quad \frac{\frac{t}{2} + 1}{\frac{t}{2}} = \frac{t}{t} = 1 \quad \checkmark \quad \text{۲ جواب اینو مقدر میخونه}$$

$$\frac{2\sqrt{n+1} - (\sqrt{n-1})/(\sqrt{n+1}) - (\sqrt{n-1})/(\sqrt{n-1}) - 2\sqrt{n+1}}{a - n + 1} = \sqrt{n-1}$$

$$\frac{2(\sqrt{n-1})(\sqrt{n+1})}{100 - n} = \sqrt{n-1} \quad n - 12 = 2\sqrt{n+1}$$

$$100 - n \geq 0 \Rightarrow n \leq 100 \quad n - 12 \geq 0 \Rightarrow n \geq 12 \quad \text{ق ق } 12 \leq n \leq 100$$

$$x^2 - 20x + 100 = tx + t \quad x^2 - 2tx + 44 = (x-12)(x-4) = 0 \quad x = 12 \text{ یا } 4$$

$$\frac{x - \sqrt{2x} - \sqrt{2x} - x}{t - 2 + x} = \frac{\sqrt{x-x}}{a} \quad n+2 = -10 \quad n = -12 \quad \text{منفی مثبت}$$

صفر مثبت است می توان آن را ساده کرد.
(اگر صفر باشد خارج صفر و صفر و صفر تعریف نشده می شود.)

$$2x^2 - 2x + 1$$

$$\frac{(1-x)^2 + x^2}{x^2(1-x)^2} = \frac{x^2 - 2x + 1 + x^2}{x^2 - 2x^3 + x^4} = \frac{140}{9} \quad 11x^2 - 11x + 9 = 140x^2 - 140x^3 + 140x^4$$

$$140x^4 - 140x^3 + 11x^2 - 11x + 9 = 0 \quad S = -\frac{b}{a} = -\frac{-11}{140} = \frac{11}{140}$$

$$-x + 4x - 1 > 0 \quad -(x-2)/(x-2) > 0 \quad \frac{c}{-d+d} \quad x < x < t$$

$$-x^2 - 2x^2 + 2x - 100 > 0 \quad -x(x-2) + 2x(x-2) > 0 \quad -(x-2)/(x-2) > 0$$

$$\frac{-2x^2}{x^2 - 2x + 2} \quad x \leq -2 \leq x \leq 2$$

$$\text{استنتاج} \rightarrow x = 2 \Rightarrow \sqrt{2} + \sqrt{14} = 2 + 2 \quad \checkmark \Rightarrow x = 2 \rightarrow \boxed{1, 1}$$

$$x|x+2| + x|x-1| + x = 1 \quad \checkmark$$

$$x > 1 \rightarrow x|x+2| + x|x-1| + x = 1 \quad \checkmark \quad x = 1 \leq x = 2 \quad \checkmark \quad y = 2$$

$$-2 \leq x \leq 1 \rightarrow x|x+2| - x|x-1| + x = 1 \quad x = 1 > 1 \quad \times$$

$$x < -2 \rightarrow -x|x+2| - x|x-1| + x = 1 \quad -2x = 20 \quad x = -10 \quad y = \checkmark$$

$$AB = \sqrt{\left(\frac{1}{2}x+2\right)^2 + \left(\frac{1}{2}x-1\right)^2} = \sqrt{2} \quad \boxed{2\sqrt{10}} \quad \text{دقت!}$$

$$\begin{cases} y = \frac{1}{2}x + 2 \\ y = -x + 2 \end{cases} \quad -x = \frac{1}{2}x \quad x = 0 \quad \checkmark \quad y = 2$$

$$\begin{cases} y = \frac{1}{2}x + 2 \\ y = x - 2 \end{cases} \quad \frac{1}{2}x + 2 = x - 2 \quad x = 4 \quad \checkmark \quad y = 4 \quad b' - b = t \rightarrow \dots$$

استنتاج

$$S = \frac{1}{2} \cdot \frac{1}{2} = \frac{1}{4}$$

$$t_B = t_F - 9 \quad t_F = t_B + 9$$

$$\frac{1}{t_B} = \frac{1}{t_B + 9} = \frac{1}{9} \quad \frac{1}{t_B + 9} = \frac{1}{9} \quad \frac{1}{t_B + 9} = \frac{1}{9}$$

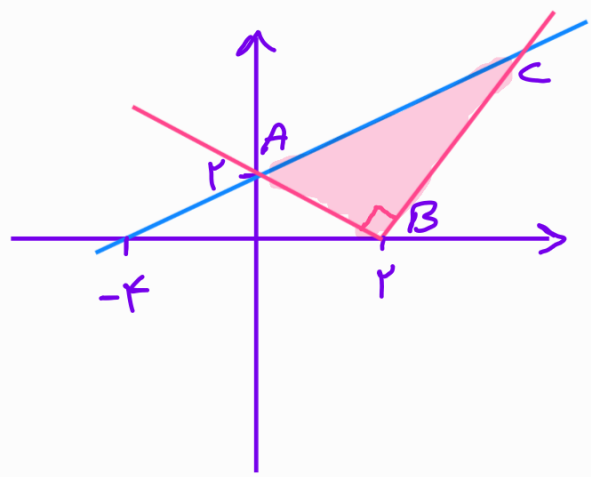
$$t_B + 9t_B = 90 \quad t_B = 10 \quad t_B = 10 \quad (t_B - 9)(t_B - 10) = 0$$

$$\boxed{t_B = 10} \quad \checkmark$$

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

$$x < 2 \rightarrow \frac{1}{r}x + r = x - 2$$

$$\rightarrow C(1, 4)$$



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$$AB = 2\sqrt{2} \quad BC = 4\sqrt{2} \rightarrow S = \frac{2\sqrt{2} \times 4\sqrt{2}}{2} = 12$$