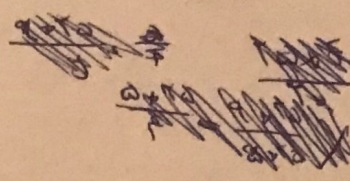


1, 28

$$\frac{a}{y} = \frac{a}{r} \quad \frac{a+a}{y} = \frac{a+ay}{a+ay}$$

$$\frac{a+a}{r} = \frac{a+ay}{a+ay}$$



0
1

2am + 4m = 4a

$$a^2 + 2a - 4a = 0 \quad (a-2)(a-1) \quad a=2 \text{ و } 1$$

$$\frac{\sqrt{a^2+y^2}}{a} = \frac{a}{y}$$

$$x^2 = y^2 \sqrt{a^2+y^2}$$

$$\frac{a^2}{y^2} = a^2+y^2$$

$$\frac{a^2}{y^2} = a^2+y^2$$

2
2

$$(r-a)^2 = r^2 + a^2$$

$$r^2 + 2r - 15a = r^2 + a^2$$

$$2r^2 - 14a + a^2 = 0$$

$$(a-2)(14a-5)$$

$$a=2 \text{ و } \frac{5}{14}$$

وقت!

$$\frac{a+1}{a} = \frac{9}{r}$$

$$\sqrt{a^2 + 4a} = 0$$

$$a=0 \text{ و } -2$$

$$\frac{-2}{\sqrt{1-1}} = 2$$

3
3

$$\frac{1}{b+a} = \frac{1}{r-b} = \frac{r}{a}$$

$$\frac{-2b}{r-b} = \frac{b}{a} \quad -10b = rb - b^2$$

$$b^2 - 14b = 0$$

$$b(b-14) = 0$$

$$b=0 \text{ و } b=14$$

$$\sqrt{r-a} = 0 \quad a=0$$

$$\sqrt{r-a} = 14 \quad a=196$$

$$\frac{r\sqrt{a+1} - \sqrt{a^2-1} - \sqrt{a^2-1} - 8\sqrt{a+1}}{9-(a-1)} = \frac{a-1}{\sqrt{a-1}}$$

$$-\sqrt{a^2-1} = (10-a)\sqrt{a-1} \quad a=12 \neq 4\sqrt{3} \rightarrow 12+4\sqrt{3}$$

$$-2\sqrt{a+1} = 10-a \quad a^2+10a-20a-20 = 0 \quad a^2-10a-20 = 0$$

$$a = 10 \pm \sqrt{100+80} = 10 \pm \sqrt{180}$$

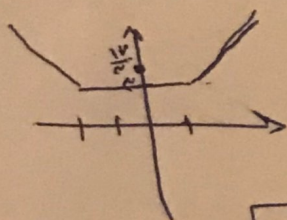
4
4

$$\frac{x^2 + 1 - x^2}{x^2(1-x^2)} = \frac{140}{9} \quad 9 \text{ bil } 140 \text{ bil } 140 \text{ bil } 140$$

$$S = \frac{-(-140)}{140} = 1 = x_1 + x_2$$

0
6

0
V

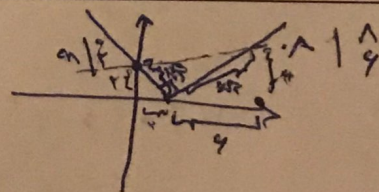


$$\sqrt{(a-(-f))(b-(v-c))} = \sqrt{A} \quad \text{X}$$

$$\begin{cases} x > 1 & \begin{matrix} yg + xz = 18 \\ xm - y = -1 \end{matrix} & \begin{matrix} yg = 18 \\ y = 2 \end{matrix} \\ 1 \leq x \leq 2 & \begin{matrix} yg \geq 18 \\ y = 18 \end{matrix} & \begin{matrix} xm = 18 \\ xm = 1 \end{matrix} \\ x < -1 & \begin{matrix} yg + xm = 18 \\ xm - y = 1 \end{matrix} & \begin{matrix} xm = 18 \\ y = 17 \end{matrix} \end{cases}$$

0.5
1
0.5
1

$$\begin{cases} x > 2 & \begin{matrix} y = \frac{1}{2}x = 1 & x = 2 \\ x - y = 4 & y = 2 \end{matrix} \\ x < 2 & \begin{matrix} y - \frac{1}{2}x = 5 & x = 0 \\ xm + y = 5 & y = 5 \end{matrix} \end{cases}$$



$$\frac{4\sqrt{2} \times 5\sqrt{2}}{2} = 15 \quad \checkmark$$

2
9

$$\frac{1}{x} + \frac{1}{x-9} = \frac{1}{4}$$

$$\frac{5x-9}{x(x-9)} = \frac{1}{4}$$

$$5x - 11 = x^2 - 9x$$

$$x^2 - 14x + 11 = 0$$

$$(x-14)(x-1) = 0$$

$$x = 14 \quad x = 1$$

$$x = 14 - 1 = 13$$

$$14 - 1 = 13 \quad \text{C4} \quad \checkmark$$

2
10

$$\frac{\Delta n + y}{r_n} = \frac{\sqrt{5} + 1}{2} \rightarrow r_n(\sqrt{5} + 1) = \Delta n + y$$

اقدایش طول

$$\Delta n$$

$$\frac{S_2}{S_1} = \frac{r_n(r_n(\sqrt{5} + 1))}{(r_n)(\Delta n)} = \frac{r}{5}(\sqrt{5} + 1)$$

$$\text{قفا} = \sqrt{n^2 + y^2} \rightarrow \frac{\sqrt{n^2 + y^2}}{n} = \frac{\sqrt{5} + 1}{2} \xrightarrow{\text{توان}} \frac{n^2 + y^2}{n^2} = \frac{4 + \sqrt{5}}{4}$$

$$\frac{y^2}{n^2} = \frac{1 + \sqrt{5}}{2} \quad \text{خواته معل} : \frac{n^2}{y^2} = \frac{2}{1 + \sqrt{5}} = \frac{\sqrt{5} - 1}{2}$$

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

منخرج دو صفر میند!

$$\text{طرفین و طبق} \rightarrow -10(2-n) = 2-n^2 \rightarrow n^2 + 10n - 22 = 0 \rightarrow \begin{cases} n = 2 \\ n = -12 \end{cases}$$

معال ریسه ها قیاسا رو من خودا!

(9)

$$\frac{1 - 2n + n^2 + n^2}{(n(1-n))^2} = \frac{2(n^2 - n) + 1}{(n - n^2)^2} = \frac{140}{9} \xrightarrow{n^2 - n = t} \frac{2t + 1}{t^2} = \frac{140}{9}$$

$$140t^2 - 18t - 9 = 0 \xrightarrow{\text{روبر}} \begin{cases} t = 0,3 \rightarrow n^2 - n - 0,3 = 0 \xrightarrow{\Delta > 0} S = 1 \\ t = -\frac{3}{14} \rightarrow n^2 - n + \frac{3}{14} = 0 \xrightarrow{\Delta > 0} S = 1 \end{cases}$$

$$S = 2$$

✓ بررسی دایره ها :

$$1) -x^3 + 4x^2 + 25x - 100 \geq 0 \rightarrow -(x-4)(x-5)(x+5) \geq 0$$

$$\begin{array}{c} -5 < 4 < 5 \\ + \quad | - \quad + \quad | - \end{array}$$

$$x \in (-\infty, 5] \cup [4, 5]$$

$$2) -x^2 + 4x - 8 \geq 0 \rightarrow x \in [2, 4]$$

$$3) \text{ زیر رادیکال اول } \geq 0 \rightarrow x \geq 0$$

$$4) \text{ زیر رادیکال دوم معکوسه مثبت}$$

$$5) \underbrace{x+2} \geq 0 \rightarrow x \geq -2$$

جواب رادیکال

$\cap \rightarrow \boxed{x=4}$
 در معادله صدق می کند
 و مقدارش 4 است ✓

$$|x+2| + |x-1| = \frac{17-x}{3}$$

-2	1	
$x = -4$	$x = 8$	$x = 2$
$A(-4, 7)$	غ غ	$B(2, 5)$

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

18