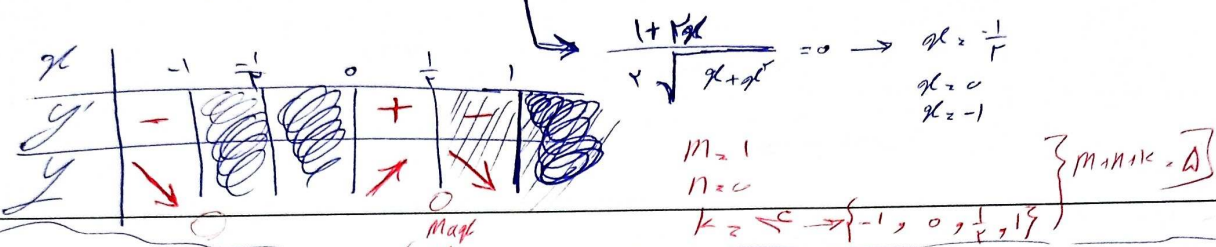


$f(x) = \begin{cases} \sqrt{x-x^r} & x \geq 0 \\ \sqrt{x+x^r} & x < 0 \end{cases}$ 
 $x \geq 0 \rightarrow \frac{1-2rx}{2\sqrt{x-x^r}} = 0 \rightarrow x = \frac{1}{r}$ 
 $x < 0 \rightarrow \frac{1+rx}{2\sqrt{x+x^r}} = 0 \rightarrow x = -\frac{1}{r}$

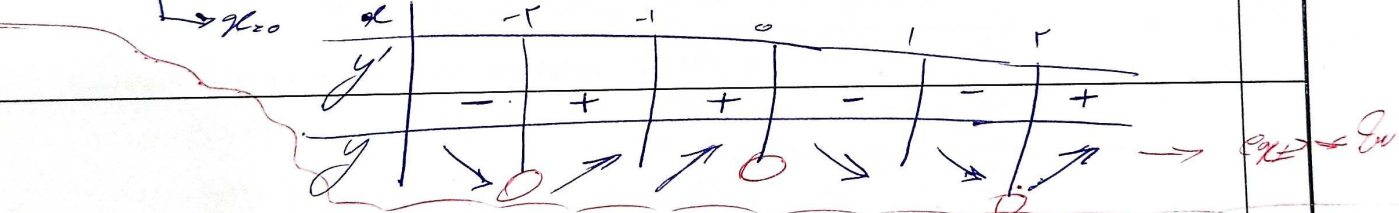


$D_f = [0, +\infty) \cap (-\infty, \frac{a}{r}]$ 
 $f'(x) = \frac{1}{2\sqrt{x}} + \frac{-r}{x\sqrt{a-rx}} = 0 \rightarrow \frac{1}{\sqrt{x}} = \frac{r}{a-rx}$



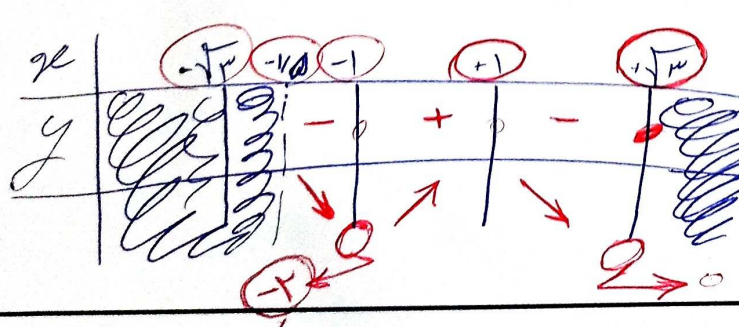
$\sqrt{\frac{a}{r}} + \sqrt{\frac{a}{r}} = \sqrt{r} \rightarrow \frac{a}{\sqrt{r}} + \frac{a}{\sqrt{r}} = \sqrt{r} \rightarrow a + 2a = r \rightarrow a = \frac{r}{3}$

$x^r - \epsilon > 0 \rightarrow x = \pm r$ 
 $f'(x) = \frac{(\epsilon x^r - n\epsilon x)(x^r - 1) - (rx)(x^r - \epsilon x^r)}{(x^r - 1)^2}$



$x=0 \rightarrow 0 = a(0) + b(0) + c(0) + d \rightarrow d=0$ 
 $x=1 \rightarrow 1 = a + b + c \xrightarrow{x=1} -r = -ra - b$ 
 $f'(x) = 3ax^2 + 2bx + c \rightarrow 3a(0) + 2b(0) + c = 0 \rightarrow c=0$ 
 $\rightarrow 3a + 2b + 0 = 0 \rightarrow b = -\frac{3a}{2}$ 
 $\rightarrow -r = a - b = a + \frac{3a}{2} = \frac{5a}{2} \rightarrow a = -\frac{2r}{5}$ 
 $\rightarrow b = \frac{6r}{5}$

$3-x^r > 0 \rightarrow x = \pm \sqrt[3]{3}$ 
 $f(x) = 3x - x^r \rightarrow f'(x) = 3 - rx^{r-1} \rightarrow x = \pm \sqrt[3]{3}$



این بخشید به نظر شما  
 کجای کار را در حل سوالات  
 قدر مطلق اشتباهی  
 شواهدش می بینم یا اینجایی

Min مطلق

$$1 = 1 + 3a + b \rightarrow 3a + b = 0 \rightarrow \frac{-3}{1} + b = 0 \rightarrow \boxed{b = \frac{3}{1}}$$

$$f'(x) = -3x^r + 4ax \rightarrow -3 - 4a = 0 \rightarrow \boxed{a = -\frac{1}{4}} \quad \frac{b}{a} = \frac{\frac{3}{1}}{-\frac{1}{4}} = -12$$

$$A \left| \begin{array}{c} \frac{-(a-1)}{a+1} \\ a \\ \frac{a}{a+1} \end{array} \right.$$

$$f'(x) = 3x + 1 \rightarrow \frac{-3(a-1)}{a+1} + 1 = 0 \rightarrow a+1 = 3a-3 \rightarrow 7a = 4 \rightarrow \boxed{a = \frac{4}{7}}$$

$$g(x) = \frac{3x+3}{4x+1} = 0 \rightarrow \boxed{x = -\frac{3}{4}}$$

$$f_x\left(-\frac{1}{4}\right)^r + a\left(-\frac{1}{4}\right)^{r+1} = 0 \rightarrow 1 - \frac{a}{4} + 1 = 0 \rightarrow \boxed{a = 8}$$

$$f'(x) = \frac{3x^r(x^{r-1}) - 3x^r(x^{r-1})}{(x^r-1)^r} = 0 \rightarrow \begin{cases} x = 1 \\ x = 0 \\ x = \frac{1}{3} \end{cases}$$

$x$	0	1	$\frac{1}{3}$	
$f'$	+	-	-	+
$f$	$\nearrow$	$\searrow$	$\rightarrow$	$\nearrow$

~~$(1, \frac{1}{3})$~~   $(1, \frac{1}{3}) \rightarrow$   $(1, \frac{1}{3})$   $\rightarrow$   $(1, \frac{1}{3})$

$$\frac{3x^r(x^{r-1}) - 3x(x^{r-1})}{(x^r-1)^r} = 0 \rightarrow \begin{cases} x = \pm \sqrt{3} \\ x = 0 \end{cases}$$