

19,5 آفرین

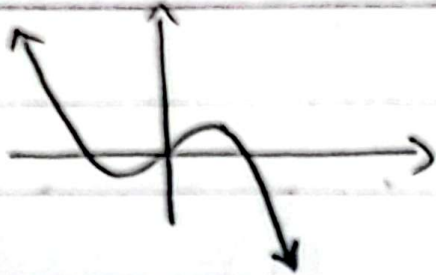
höpfen

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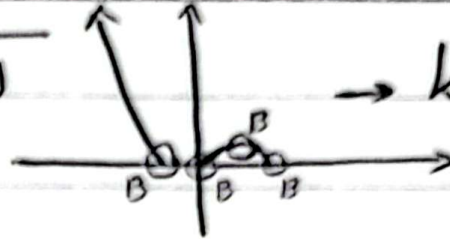
DATE / /

SUBJECT:

$y = a(1 - |x|)$



$f(x) = \sqrt{a(1 - |x|)}$



$k = r, m = 1, n = 2$ ①

$\rightarrow k + m + n = r + l + o = \boxed{4}$ ②

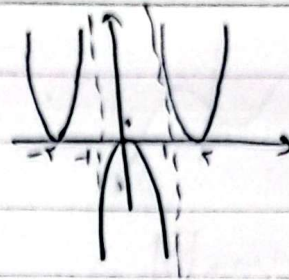
$D_f = [0, \frac{a}{r}] \rightarrow$ ~~minimale, maximale~~ $f'(x) = \frac{1}{\sqrt{x}} + \frac{-r}{r\sqrt{a-rx}} \rightarrow$ ③

$f'(x) = 0 \rightarrow \frac{1}{\sqrt{x}} = \frac{1}{\sqrt{a-rx}} \rightarrow a - rx = x \rightarrow x = \frac{a}{r} \rightarrow$
 $\begin{matrix} - & 0 & \frac{a}{r} & \frac{a}{r} & + \\ & | & + & | & - \\ & & \frac{a}{r} & & \end{matrix}$

$f(0) = \sqrt{a}$ (max), $f(\frac{a}{r}) = \sqrt{\frac{a}{r}} + \sqrt{\frac{ra}{r}}$, $f(\frac{a}{r}) = \sqrt{\frac{a}{r}}$ (min) $\rightarrow \frac{a}{\sqrt{r}} = \sqrt{r} \rightarrow a = \sqrt{r} \rightarrow [a] =$

$[JFF] = \boxed{4}$ ④

$n_1 \rightarrow \infty \rightarrow f(x) \rightarrow \dots$
 $n_2 \rightarrow -\infty \rightarrow f(x) \rightarrow \dots$
 $f(x) \rightarrow \dots$
 $f(x) \rightarrow \dots$

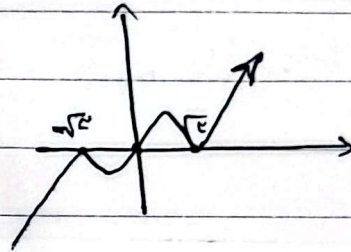


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 ۳ نقطه آلتیم
 یعنی دارد

$a+b+c+d=1, \quad 1^2a+2^2b+3^2c=0, \quad d=0, \quad c=0 \rightarrow a+b=1$
 $1^2a+2^2b=0 \rightarrow a=-2b \rightarrow a=-2, \quad b=1$

$ab = -2$

$f(x) = x|x^2-1| = x|x-\sqrt{1}||x+\sqrt{1}|$



طبق نمودار min در $x=0$ قرار می‌گیرد

$f(x) = x(x^2-1) \rightarrow f'(x) = 3x^2 - 2x = 0 \rightarrow x=0 \rightarrow f(0) = 0$
 $x=1 \rightarrow f(1) = 0$
 $x=-1 \rightarrow f(-1) = 0$

$1+3a+b=0 \rightarrow 3a+b=0$
 $a = -\frac{b}{3} \rightarrow b = \frac{c}{2} \rightarrow \frac{b}{a} = \frac{-\frac{c}{2}}{-\frac{c}{6}} = 3$

$9s = \frac{1}{c} \rightarrow y = \frac{1}{4} - \frac{1}{c} + \frac{1}{c} = \frac{1}{4}$
 $\frac{1}{4} = \frac{1}{c} \rightarrow c = 4$

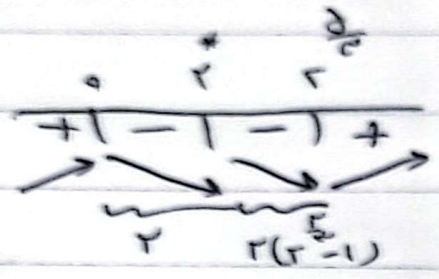
$a=2 \rightarrow y = \frac{2m+c}{2m+1} \rightarrow \frac{2m+c}{2m+1} = 0 \rightarrow m = -\frac{c}{2}$

$\frac{b}{c} = 3 \rightarrow b = 12, \quad 1 - \frac{a}{c} + 1 = 0 \rightarrow a = 2c = 24$

$\frac{b}{a} = \frac{12}{24} = \frac{1}{2}$

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$$f_w = \frac{r n^{r+1} (n^r - 1) - (r n^r) (n^r)}{(n^r - 1)^r} = \frac{r n^{2r} - r n^r - r n^{2r}}{(n^r - 1)^r} = \frac{n^{2r} - r n^r}{(n^r - 1)^r} = \frac{n^r (n^r - r)}{(n^r - 1)^r} \rightarrow \textcircled{9}$$

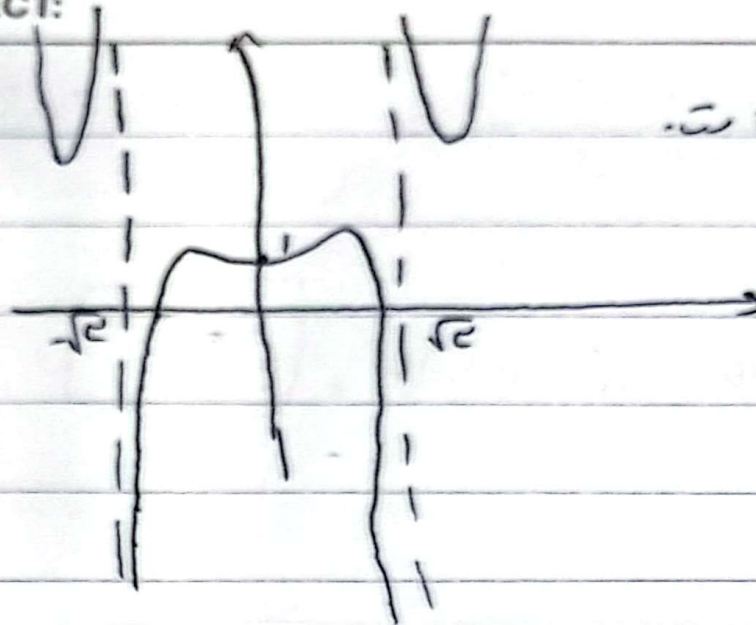


$$\text{min } 0; Ldb = \boxed{\frac{d}{r} - r} \textcircled{r}$$

پوٹنشل

DATE / / SUBJECT:

$$f(x) = \frac{x^2 - 2}{x^2 - 1}$$



1) در $x = (-2, 2)$ در دو بازه آید از نمودار مت.

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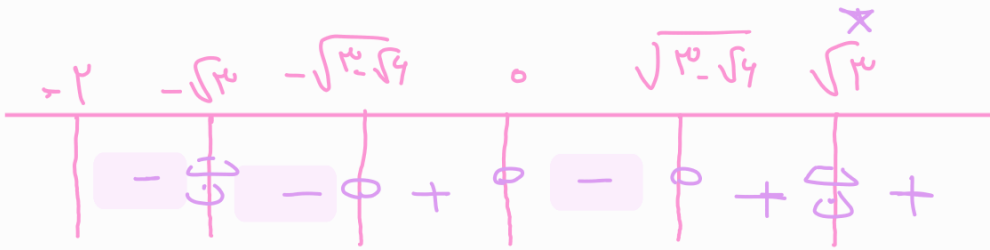
$$f'(x) = \frac{2x^3(x^2-3) - 2x(x^2-3)}{(x^2-3)^2} = \frac{2x[(2x^2-4x^2) - (x^2-3)]}{(x^2-3)^2}$$

$$2x^3 - 4x^3 + 4x = 0 \rightarrow 2x(x^2 - 4x^2 + 3) = 0 \rightarrow x = 0$$

$$\hookrightarrow x^2 = 3$$

$$x^2 - 4x + 3 = 0 \rightarrow x = \frac{4 \pm \sqrt{16}}{2} \rightarrow x = \pm \sqrt{3-4}$$

$-2 < x < 2$



در بازه $(-\infty, -\sqrt{3})$ و $(\sqrt{3}, \infty)$ نزولی است!