

پاڻي جي ڪوٽي (Water Level) جي ڪوٺي (Height) جي ڪوٺي (Height) جي ڪوٺي (Height) جي ڪوٺي (Height)

$$f(m) = 1 - \frac{a}{n} \quad [15^*]$$

(10 سوال)

$$n=1 \rightarrow f(m) = 1 - a$$

$$n=r \rightarrow f(m) = 1 - \frac{a}{r}$$

$$\rightarrow \text{ڪوٽي جي ڪوٺي} = \frac{(1 - \frac{a}{r}) - (1 - a)}{r} = \frac{a}{r}$$

$$f'(m) = \frac{a}{n^2} \rightarrow \frac{a}{n^2} = \frac{a}{r} \rightarrow n^2 = r \rightarrow \boxed{n = \pm \sqrt{r}}$$

$$y = r a n^2 - a n + 11 a \quad a=5 \quad (15 سوال)$$

$$r a n^2 - a n + 11 a = 0 \rightarrow r a n^2 - a n + 11 a = 0 \rightarrow a n^2 - n + 11 a = 0$$

$$m=1 \rightarrow y' = \epsilon a n - a \rightarrow \epsilon a n - a = 1 \rightarrow \epsilon a n = 4 \rightarrow n = \frac{4}{\epsilon a}$$

$$\rightarrow n = \frac{r \pm \sqrt{9 - 4 \epsilon a^2}}{\epsilon a} \rightarrow \frac{r \pm \sqrt{9 - 4 \epsilon a^2}}{\epsilon a} = \frac{r}{\epsilon a}$$

$$\rightarrow 9 - 4 \epsilon a^2 \geq 0 \rightarrow a^2 \leq \frac{9}{4} \rightarrow a \leq \frac{3}{2} \rightarrow \text{ڪوٽي جي ڪوٺي} = -\frac{1}{r}$$

$$y = a n^2 - 11 a n + r \quad (15 سوال)$$

$$y' = 2 a n - 11 a \rightarrow 2(a - r)(n + r)$$

| | | |
|----|-----|-----|
| | -r | r |
| y' | + | - |
| y | ↗ | ↘ |
| | max | min |

$$n=r \rightarrow y = 11 - 11 \epsilon + r = \boxed{-1 \epsilon}$$

$$y = a n^2 + a n^2 - r b n - \epsilon \quad (15 سوال)$$

$$y' = 2 a n + \epsilon a n - r b \rightarrow n=0 \rightarrow -r b = 0 \rightarrow \underline{b=0}$$

$$\rightarrow n = -r \rightarrow 11 - \epsilon a = 0 \rightarrow \underline{a=r}$$

$$\rightarrow y = a n^2 + r n^2 - \epsilon \rightarrow n=0 \rightarrow y = -\epsilon \quad \text{No. of } = \sqrt{\epsilon + 14} = \boxed{r \sqrt{a}}$$

$$\rightarrow n = -r \rightarrow y = -11 + 11 - \epsilon = 0$$

پاڻي

Subject:

Year:

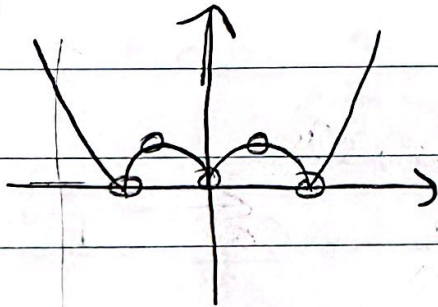
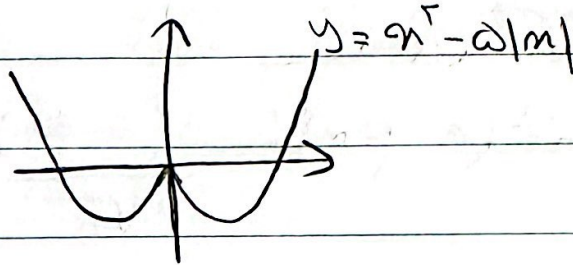
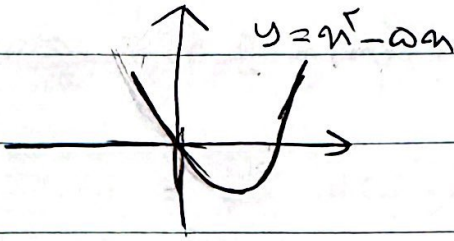
Month:

Date:

$$f(m) = a^r - a|m|$$

سوال (۱)

$$|f(m)| = |a^r - a|m||$$



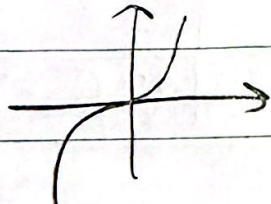
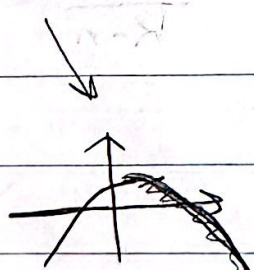
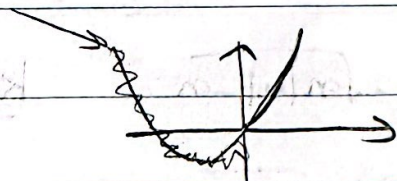
تقطعات را جدا کن

$$m = r \quad n = r \rightarrow \frac{n}{m} = \frac{r}{r}$$

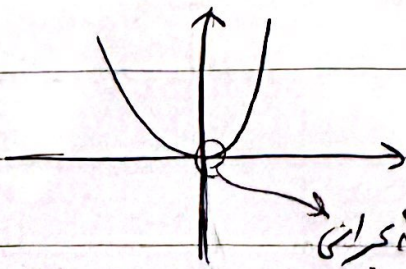
$$f(m) = a(|m| + k) \xrightarrow{a > 0} a^r + km$$

سوال (۲)

$$a < 0 \rightarrow -a^r + km$$



$$y = |f(m)|$$



تقطعات را جدا کن

$f(m) = \sqrt[p]{n^r} |m-a| \quad a = ?$ (سوال 17)

$0 \leq m \leq a \rightarrow -a \leq m-a \leq 0 \rightarrow |m-a| = a-m$

$f(m) = \sqrt[p]{n^r} (a-m) \rightarrow a n^{\frac{r}{p}} - m^{\frac{r}{p}} \rightarrow f'(m) = \frac{r a}{p} n^{\frac{r}{p}-1} - \frac{r}{p} m^{\frac{r}{p}-1}$

$\rightarrow \frac{r}{p} n^{\frac{r}{p}-1} (a - \frac{m}{n}) = \frac{r (a - \frac{m}{n})}{p \sqrt[p]{n}} = 0 \rightarrow \frac{a}{n} = \frac{m}{n} \rightarrow \frac{r}{p} a = \frac{r}{p} m$

$f(0) = f(a) = 0$

$f(\frac{r}{\omega} a) = \omega \rightarrow \sqrt[p]{(\frac{r a}{\omega})^r} (\frac{r}{\omega} a) = \frac{r}{\omega}$

$\rightarrow \frac{r a^r}{\omega^r} \times \frac{a^r}{r a} = \frac{1}{\omega} \rightarrow \frac{r a^{\omega}}{\omega^{\omega}} = \frac{1}{\omega}$

$\rightarrow r r a^{\omega} = \omega^{\omega} \rightarrow a^{\omega} = \frac{\omega^{\omega}}{r^{\omega}} \rightarrow a = \frac{\omega}{r}$

$f(m) = \sqrt{n} |m| - m \quad \frac{km+n}{k-n} = ?$ (سوال 18)

$\begin{cases} m > 0 \\ m < 0 \end{cases} \rightarrow \begin{cases} \sqrt{n} m - m \\ -\sqrt{n} m - m \end{cases} \rightarrow \begin{cases} \frac{0}{\cancel{m} - \cancel{m} +} \Rightarrow m \geq 1 \Rightarrow f'(m) = \frac{r m - 1}{\sqrt[p]{n^r - m}} = 0 \\ \frac{0}{\cancel{m} - \cancel{m} +} \Rightarrow m \leq -1 \Rightarrow f'(m) = \frac{-r m - 1}{\sqrt[p]{n^r - m}} = 0 \end{cases}$

$\rightarrow m = \frac{1}{r}$ (میزان و غیر اکثریم)
 $\rightarrow m = -\frac{1}{r}$ (میزان و غیر اکثریم)

$m = 1$
 $n = 0$
 $k = 2 \rightarrow \frac{r}{r} = 1$

میزان و اکثریم $\rightarrow \max$ می‌باشد
 میزان و غیر اکثریم

$$y = \frac{m\alpha + r}{n-1+m} \rightarrow y' = \frac{m^r - m - r}{(n-1+m)^2}$$

+ 0/0

(سوال 9)

$$\rightarrow (m-r)(m+1) < 0 \rightarrow \frac{-}{+} \frac{+}{-}$$

نکته: در صورتی که $(m-r)(m+1) < 0$ باشد

$$f(m) = \frac{\alpha}{1-\alpha|m|}$$

(سوال 10)

$$\alpha > 0 \rightarrow \frac{\alpha}{1-\alpha^r} \rightarrow f'(m) = \frac{\alpha^{r+1}}{(1-\alpha^r)^2} \neq 0 \rightarrow 1-\alpha^r = 0 \rightarrow \alpha = +1 \vee \alpha = -1$$

GGG

$$\alpha < 0 \rightarrow \frac{\alpha}{1+\alpha^r} \rightarrow f'(m) = \frac{1-\alpha^r}{(1+\alpha^r)^2} = 0 \rightarrow \alpha = 1 \text{ GGG} \vee \alpha = -1 \text{ GG}$$

هنگامی که $\alpha < 0$ باشد

در نقطه 0

$$\rightarrow f(0^+) = f(0^-) = 0$$

$$\rightarrow f'_+(0) = f'_-(0) = 1 \rightarrow \text{فقط در نقطه 0} \rightarrow \boxed{-1, 1}$$