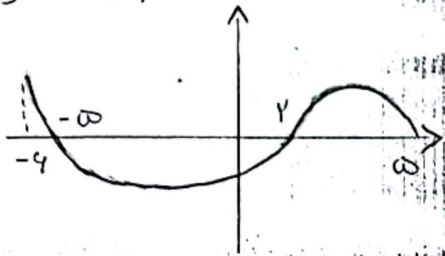
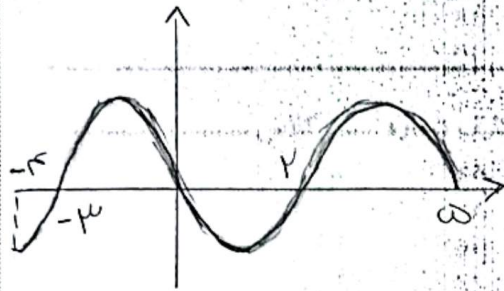


$$y = f(x)$$



$$y = \sqrt{x f(x)} \quad \text{for } x f(x) \geq 0$$

$$D_f = [-\infty, 0] \cup [2, \infty]$$



$$y = \sqrt{\frac{-x}{f(x)}} \rightarrow \frac{-x}{f(x)} \geq 0$$

$$\frac{x}{y} \leq 0$$

$$D_f = (-\mu, 2) - \{0\}$$

$$f(x) - 2f(2) = x^2 - \mu x + \kappa \Rightarrow$$

$$f(-2) - 2f(2) = 1\kappa$$

$$f(2) - 2f(2) = 2 \Rightarrow -f(2) = 2 \Rightarrow f(2) = -2$$

$$f(-2) \rightarrow f(-2) + \kappa = 1\kappa \Rightarrow f(-2) = 10$$

$$f(x) = \begin{cases} x - \sqrt{x + \kappa} & x > \mu \\ \mu x + \mu & x \leq \mu \end{cases}$$

$$\underbrace{f(f(\omega))}_\nu + \underbrace{f(f(1))}_2 = 9$$

$$f(x) = ax^2 - bx + 2 \quad f(x-1) - f(x) = 9x + 2$$

$$\frac{x=(x-1)}{\rightarrow} a(x-1)^2 - b(x-1) + 2 = -2ax + a + b = 9x + 2 \Rightarrow \begin{cases} a = -\mu \\ b = \omega \end{cases}$$

$$a - b = -\mu - \omega = -\lambda$$

$f(n) = n^r - n + 1$ $\frac{\underbrace{r}_{1} \underbrace{f(r)}_{1} + \underbrace{\infty}_{\infty} \underbrace{f(-1)}_{1}}{\underbrace{f^r(r)}_{(-1)^r=1}} = \frac{r+\infty}{1} = \infty$	9
$f(n) = \begin{cases} n+1 & n \geq r \\ n^r & n < r \end{cases}$ $\frac{\underbrace{r+1}_{r} \underbrace{f(r)}_{-1} - \underbrace{r}_{-1} \underbrace{f(-1)}_{r}}{\underbrace{f(r)}_{r}} = \frac{r+1}{r}$	7
$f = \{(r, 4), (r, r), (r, 1), (1, 4)\}$ $\frac{f(f(r)) - f(f(r))}{f(1) - r} = \frac{4 - 4}{r} = \frac{0}{r} = 0$	8
$f(n) = \frac{n^r + \infty n + 9}{n^r + \infty n + \infty} = \frac{(\sqrt{r}-r)^r + \infty(\sqrt{r}-r) + 9}{(\sqrt{r}-r)^r + \infty(\sqrt{r}-r) + \infty} = \frac{1}{r} = r$ $\underbrace{f(f(\sqrt{r}-r))}_r = \frac{r-1+9}{\infty-1+\infty} = \frac{r}{\infty}$	9
$f(n) = n^r + \frac{1}{n^r}$ $\xrightarrow{n=\sqrt{n}} (\sqrt{n})^r + \frac{1}{(\sqrt{n})^r} = n + \frac{1}{n}$ $(n + \frac{1}{n})^r = n^r + r + \frac{1}{n^r}$ $(f(\sqrt{n}))^r - f(n) = n^r + r + \frac{1}{n^r} - n^r - \frac{1}{n^r} = r$	10