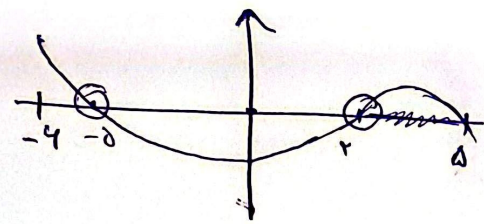


A دفتر

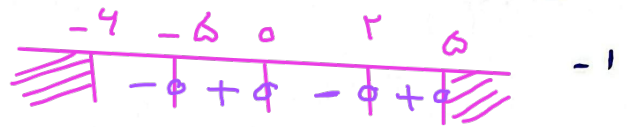


$$y = \sqrt{u f(u)}$$

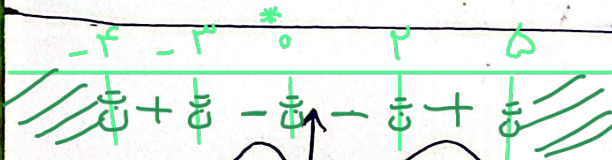
$$u f(u) \geq 0$$

$$u < 0$$

$$[-4, 0] \cup [2, 4]$$

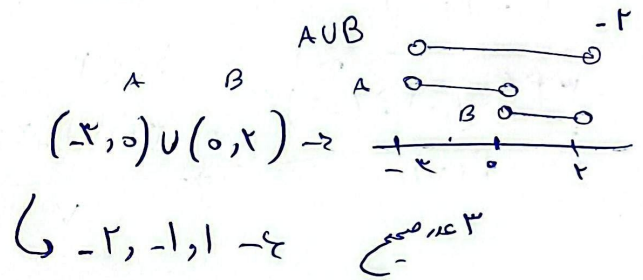


1, 5



$$y = \sqrt{\frac{-m}{f(m)}}$$

$$\frac{-m}{f(m)} \geq 0$$



1, 5

$$f(m) - 2f(2) = m^2 - 3m + 4$$

$$f(-2) = 0$$

$$\rightarrow f(-2) - 2f(2) = 4 + 4 + 4$$

$$f(-2) - 2(-2) = 12$$

$$f(2) - 2f(2) = 4 - 4 + 4 \rightarrow f(2) = 2$$

$$f(-2) = 12$$

Q ✓

$$f(m) = \begin{cases} m - \sqrt{m+4} & m > 2 \\ 2m+2 & m \leq 2 \end{cases}$$

$$f(4) = 4 - \sqrt{4+4} = 2$$

$$f(f(4)) = f(2) = 2(2) + 2 = 6$$

$$f(f(4)) + f(f(1)) = 6 + 3 = 9$$

$$1 \leq 2$$

$$f(1) = 2(1) + 2 = 4$$

$$f(f(1)) \rightarrow f(4) = 4 - \sqrt{4+4} = 2$$

$$6 + 3 = 9$$

Q ✓

$$f(m) = am^2 - bm + 2$$

$$f(m-1) - f(m) = 4m+2 \rightarrow f(m-1) = a(m-1)^2 - b(m-1) + 2$$

$$\rightarrow am^2 - 2am + a - bm + b + 2$$

$$f(m-1) - f(m) \rightarrow (-2a-b)m + a+b$$

$$a-b = -3, a+b = 2$$

$$-2a = 4$$

$$a = -2$$

$$a-b = 2$$

$$a+b = 2$$

$$b = 4$$

Q ✓

-7

$$f(n) = n^r - n_{n+1}$$

$$f(r) = 9 - 9 + 1 = 1$$

$$\frac{rf(r) + f(-1)}{f(r)} = ?$$

$$f(-1) = 1 + r + 1 = 2$$

$$f(r) = 9 - 9 + 1 = 1$$

$$\hookrightarrow \frac{r(1) + 2}{(-1)^r} = \sqrt{}$$

Ⓟ ✓

-V

$$f(n) = \begin{cases} n_{n+1} & n \geq r \\ n^r & n < r \end{cases}$$

$$f(r) = r(r) + 1 = 1^r$$

$$f(-r) = (-r)^r - r$$

$$f(r) = r(r) + 1 = 2$$

$$\frac{rf(r) - rf(-r)}{f(r)} = ? \rightarrow \frac{r(1^r) - r(-r)^r}{1}$$

$$\hookrightarrow \frac{r \cdot 1 - 1}{1} = \frac{r-1}{1}$$

Ⓟ ✓

-A

$$f = \{(r, 4), (r, r), (r, 1), (1, 4)\}$$

$$\frac{f(f(r)) - f(f(r))}{f(1) - r}$$

$$f(r) = 1$$

$$f(r) = r$$

$$\frac{4-4}{r-r} = 0$$

$$f(1) = 4$$

$$f(r) = 4$$

$$f(1) = 4$$

Ⓟ ✓

-9

$$f(n) = \frac{n^r + \epsilon n + 9}{n^r + \epsilon n + 4}$$

$$n = \sqrt{r-r} \rightarrow n+r = \sqrt{r}$$

$$\hookrightarrow n^r + \epsilon n + 4 = (n+r)^r + 1$$

$$f(f(\sqrt{r-r})) = ?$$

$$\hookrightarrow r+1 = r$$

$$f(r) = \frac{r+1+9}{r+1+4} = \frac{r+1}{r+4}$$

$$n^r + \epsilon n + 9 = (n+r)^r + 4$$

$$\hookrightarrow r+4 = 1$$

Ⓟ ✓

-10

$$f(n) = n^r + \frac{1}{n^r}$$

$$f(\sqrt{n}) = (\sqrt{n})^r + \frac{1}{(\sqrt{n})^r}$$

$$(f(\sqrt{n}))^r - f(n) = ?$$

$$\hookrightarrow n + \frac{1}{n}$$

Ⓟ ✓

$$(n + \frac{1}{n})^r \rightarrow \underbrace{n^r + r}_{f(n)} + \frac{1}{n^r} \rightarrow \sqrt{}$$