

$f(n) = \begin{cases} a + \sqrt{n^r} & n < 1 \\ b + \sqrt{n^r} & n \geq 1 \end{cases}$ دینے والے مشق پر جواب دینا ہے $a+b=?$ (1)

$\begin{cases} a + |n| & n < 1 \\ b\sqrt{n^r} & n \geq 1 \end{cases}$ یہ مشق ہے $\rightarrow \frac{1}{\sqrt{n^r}} \rightarrow 1 = \frac{rb}{r} \rightarrow b = \frac{r}{r}$
 $a = b - 1 \rightarrow a = \frac{1}{r}$

$f(n) = \frac{|n-1|}{\sqrt{n^r}}$ $g(n) = \frac{\sqrt{n^r-1} + \sqrt{n^r}}{\sqrt{n^r}}$ $f'(1) - rg'(1)$ (2)

$n^r - 1 + 1 = (n-1)^r$ $f'(1) - rg'(1) = \left(\frac{-r\sqrt{n^r}}{\sqrt{n^r}} \right)'$ (3)

$-\left(\frac{r}{\sqrt{n^r}} \times (n^r - 2\sqrt{n^r}(n)) \right)$ $\rightarrow \frac{r\sqrt{n^r-1}}{n} = -\frac{r\sqrt{n^r}}{n} = -\frac{r}{\sqrt{n^r}}$

$f(n) = \begin{cases} bn + c & n < a \\ \frac{1}{n} & n \geq a \end{cases}$ $n=0$ پر مشق $-\frac{1}{n} + c = \frac{1}{n}$ (4)

$bn + c = \frac{1}{n}$ $f'(n) = \begin{cases} b & n < a \\ -\frac{1}{n^2} & n \geq a \end{cases} \rightarrow b = -\frac{1}{n^2}$ $c = \frac{r}{n} = \frac{r}{a}$

$n \rightarrow a$ $ac = r$ (5)

$f(n) = \begin{cases} b & n < a \\ b + (n-a)^m & n \geq a \end{cases}$ $m(n-a)^{m-1} \neq 0$ (6)

$f'(n) = \begin{cases} 0 & n < a \\ m(n-a)^{m-1} & n \geq a \end{cases}$ $a+ \rightarrow m(a)^{m-1} \neq 0 \rightarrow m=1$

$f(n) = \frac{1}{\sqrt{n-1}}$ $g(n) = \frac{1}{n^r - |n^r|}$ $g'(\sqrt{r}) + f'(g(\sqrt{r})) = (f \circ g)'(\sqrt{r})$ (7)

$f \circ g = \frac{1}{\sqrt{\frac{1}{n^r - |n^r|} - 1}}$ $= \frac{1}{\sqrt{\frac{1}{n^r} - \frac{1}{n^r}}} = \frac{1}{\sqrt{\frac{1}{n^r} \times n}} = \frac{1}{\sqrt{\frac{1}{n^r} \times n^r}} = \frac{1}{\sqrt{1}} = \frac{1}{1} = 1$

(8) (9)

$y = -an - d$ $f'(c) - f(c) = r$ $\frac{f(c)}{f'(c)} = p$ (10)

$f(c) = -ac - d$ $f'(c) = -a$

$-a + ac + d = ra + d = r \rightarrow ra = -r \rightarrow a = -\frac{r}{r}$ $f(c) = +\frac{r}{r} - d = -\frac{1}{r}$

$-a + ra + d = ra + d = r \rightarrow ra = -r \rightarrow a = -\frac{r}{r}$ $f(c) = \frac{r}{r}$ (11)

$$f(n) = (n[n^2 + \frac{1}{2}]) + 1, \quad g(n) = \frac{1}{\sqrt{n^2 - 1}} \quad (f \circ g(\frac{n}{\sqrt{\lambda}}))'$$

$$(f \circ g)' = f' \circ g \times g'$$

$$g' = \frac{1}{2\sqrt{n^2 - 1}} \rightarrow n = \frac{n}{\sqrt{\lambda}} \rightarrow \frac{\frac{1}{2\sqrt{n^2 - 1}}}{\frac{n}{\sqrt{\lambda}}} = \frac{1}{2\sqrt{\lambda}}$$

$$= \frac{1}{2\sqrt{\lambda}} = \frac{1}{2\sqrt{2}}$$

$$g(\frac{n}{\sqrt{\lambda}}) = \frac{1}{\frac{1}{2}} = 2$$

$$f(2) = (2[\frac{1}{2}]) + 1 = 1 + 1 = 2$$

$$2 \times \frac{1}{2\sqrt{2}} = \frac{1}{\sqrt{2}}$$

$$1 \times \frac{1}{\sqrt{2}}$$

$$f(n) = f(n+1) + f(n+10) \quad g'(n) = ?$$

$$f(n) = f(n+1) \rightarrow f'(n) = f'(n+1) \rightarrow f'(-1) = f'(1)$$

$$g'(-1) = f'(-1) + f'(-10)$$

$$n = -1 \rightarrow f'(-1) = 1 \times \frac{1}{2} = \frac{1}{2}$$

$$1$$

$$y = n^2 - 1$$

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$$y = \frac{1}{2}n + 1$$

$$y' = 2n - 1 = -1 \rightarrow n = 1 \rightarrow 1 - 1 + 1 = 1$$

$$1$$

$$1$$

By the way

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