

$$\rightarrow n > 1 \rightarrow g(n) = \sqrt{3n-2-n} = \sqrt{2(n-1)} \rightarrow \sqrt{2n-2}, \quad (100 \text{ سوال})$$

$$\rightarrow D_f^{(1)} [1, +\infty)$$

$$\rightarrow n < 1 \rightarrow g(n) = \sqrt{2n+2-n} = \sqrt{n+2} \rightarrow \sqrt{n+2}, \quad \rightarrow \frac{-2}{-1} \rightarrow D_f^{(2)} [2, +\infty)$$

$$\textcircled{1} \cup \textcircled{2} = [2, +\infty)$$

$$2f(a) = f(a-2) + a \quad f(n) = \begin{cases} (a+1)(n+2); & n > 1 \\ 3a+2n & ; n \leq 1 \end{cases} \quad (40 \text{ سوال})$$

$$2f(a+1) = 3a-2+a \quad \hookrightarrow f(a) = (a+1) \cdot 2 = 2a+2$$

$$1 \leq a+1 \leq 3a-2 \rightarrow 1 \leq a \leq -1 \quad \hookrightarrow f(a-2) = 3a-2$$

$$\Rightarrow 1 \leq a \leq -1 \rightarrow a = \frac{-1+1}{2} = -1$$

$$f(n) = \sqrt{n} + \frac{1}{\sqrt{n}} + 2 \rightarrow (1-\sqrt{2})(1+\sqrt{2}) = 1 \Rightarrow \frac{1}{1-\sqrt{2}} = 1+\sqrt{2}$$

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

$$2(\sqrt{1+\sqrt{2}} + \sqrt{1-\sqrt{2}} + 2)$$

$$A \xrightarrow{\text{كوس}} A^2 = 1+\sqrt{2} + 1-\sqrt{2} + 2 = A^2 = 4 \rightarrow A = \sqrt{4}$$

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

$$\begin{cases} (2f(n) - af(-n)) = \varepsilon n^2 - \eta/2 \\ (2f(-n) - af(n)) = \varepsilon n^2 + \eta/2 \end{cases}$$

$$-af(n) = \varepsilon n^2 - \eta/2 + 2f(n) \Rightarrow f(n) = \frac{\varepsilon n^2 + \eta}{-a}$$



$$(n+r)f(n) - rnf(n+r) = \varepsilon n^p - mn + r^{p-m-1} \quad (9 \text{ سوال})$$

$$\xrightarrow{n \rightarrow r} 4f(0) = 14 + rm + r^{p-m-1} \rightarrow 4f(0) = d(r+m)$$

$$\rightarrow f(0) = \frac{d}{4} (r+m)$$

$$\xrightarrow{n \rightarrow 0} rf(0) = r^{p-m-1} \rightarrow f(0) = \frac{r^{p-m-1}}{r}$$

$$\Rightarrow \frac{d}{4} (r+m) = \frac{r^{p-m-1}}{r} \Rightarrow 1\delta + dm = 9m - \varepsilon$$

$$\varepsilon m \leq 11 \Rightarrow m \leq \frac{9}{p}$$

$$f(0) = \frac{d}{4} \times \frac{1\delta}{r} = \frac{r\delta}{\varepsilon}$$

$$f(n) + f\left(\frac{1}{n}\right) = \frac{r_n^p - 1r_n + r}{n}$$

$$rf(r-1) = \frac{r+1r+\varepsilon}{-1} \Rightarrow f(r-1) = -9$$