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$$x < 1$$

$$\bigwedge_{-r \leq n < 1} II$$

$$f(n) = \begin{cases} (a+1)(n+2); & n > 1 \\ 3a+2n & ; n < 1 \end{cases}$$

$$f(a) = (a+1) \times 2 = 2(a+1)$$

$$f(-2) = 3a - 4$$

$$2f(a) = f(-2) + a$$

$$1(2a+2) = 3a - 4 + a \rightarrow 10a = -18$$

$$a = -1/5$$

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

$$f(\sqrt{2}-\sqrt{3}) + f(\sqrt{2}+\sqrt{3}) = \sqrt{\sqrt{2}-\sqrt{3}} + \frac{1}{\sqrt{\sqrt{2}-\sqrt{3}}} + 2 + \sqrt{\sqrt{2}+\sqrt{3}} + \frac{1}{\sqrt{\sqrt{2}+\sqrt{3}}} + 2 =$$

$$\rightarrow = \frac{\sqrt{2}-1}{\sqrt{\sqrt{2}-\sqrt{3}}} + \frac{\sqrt{2}}{\sqrt{\sqrt{2}-\sqrt{3}}} + \frac{\sqrt{2}+1}{\sqrt{\sqrt{2}+\sqrt{3}}} + \frac{\sqrt{2}}{\sqrt{\sqrt{2}+\sqrt{3}}} + 4 =$$

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

$$2f(n) - 3f(-n) = 5n^2 - n \xrightarrow{\times 2} 4f(n) - 6f(-n) = 10n^2 - 2n$$

$$2f(-n) - 3f(n) = 5n^2 + n \xrightarrow{\times 3} 6f(-n) - 9f(n) = 15n^2 + 3n$$

$$-5f(n) = 5n^2 + n$$

$$f(n) = \frac{5n^2 + n}{-5}$$

$$(n+2)f(n) - 3nf(n+2) = 5n^2 - mn + 3m - 1$$

$$n = -2 : 4f(0) = 14 + 2m + 3m - 1 = 5m + 13$$

$$n = 0 : 2f(0) = 3m - 1 \xrightarrow{\times 2} 4f(0) = 6m - 2$$

$$\begin{cases} 5m + 13 = 6m - 2 \\ \rightarrow 15 = m \end{cases}$$

$$m = 15$$

$$2f(0) = 14/2 \rightarrow f(0) = 7$$

$$f(n) = an + b$$

$$f(n) + f(1/n) = \frac{3n^2 - 12n + 3}{n}$$

$$\rightarrow an + b + \frac{a}{n} + b = 3n + \frac{3}{n} - 12$$

$$\begin{cases} a = 3 \\ 2b - 12 = -9 \end{cases}$$

$$f(n) = 3n - 9 \xrightarrow{f(-1)} f(-1) = -3 - 9 = -12$$