

$$\sqrt{x} \rightarrow x \geq 0 \rightarrow \text{قابل قبول} \quad \textcircled{I} \quad \begin{matrix} 2n-1 & x > 5 \\ 5n+3 & x < 5 \end{matrix}$$

$$\sqrt{3x+5} \geq 0 \rightarrow x \geq -\frac{5}{3} \rightarrow x \in \left[-\frac{5}{3}, 5\right) \quad \textcircled{II}$$

$$\textcircled{I} \cup \textcircled{II} = \left[-\frac{5}{3}, 5\right)$$

$$\frac{3 \left(\frac{18n^3 + 12n^2 + 4n + 1}{(n+1)^3} \right)}{(n+1)^3} = \frac{3}{(n+1)} \rightarrow D_f = \mathbb{R} - \left\{ -\frac{1}{3} \right\}$$

$$\frac{x^3 + 2n^2 - n - 2}{n^3 - n^2} \cdot \frac{n-1}{n^2 + 3n + 2} = \frac{2n^2 - n - 2}{2n^2 - 2n} \cdot \frac{n-1}{n^2 + 3n + 2}$$

$$\frac{(x-1)(n+1)(n+2)}{(n-1)(n+1)} \rightarrow C=2$$

$$\frac{a+2}{b+1} = 3$$

$$\frac{-a+2}{b-1} = 1$$

$$g(1) = 3$$

$$g(-1) = 1$$

$$a+2 = 3b+3$$

$$-a+2 = b-1$$

$$3b+1 = -b+3$$

$$4b = 2 \rightarrow b = \frac{1}{2}$$

$$b+C = \frac{a}{2}$$

$$C=1 \quad b=1 \quad a=-2 \leftarrow (x-1)^3 = n^3 - 3n^2 + 3n - 1$$

$$a+b+C=0$$

$$(n-1)^3(n) + (-n-2)^3(-n) =$$

$$n(n^3 - 3n^2 + 3n - 1) + (-n-2)^3(-n) =$$

$$\cancel{n^4} - 3n^3 + 3n^2 - \cancel{n} + \cancel{(-n^4 - 6n^3 - 12n^2 - 8n)} = -18n^2$$

$$1-2n = -1 \rightarrow n=1 \rightarrow \sqrt{1} = 1$$

$$1-2n = 3 \rightarrow n=-1 \rightarrow \sqrt[3]{-1} + 2 = 1$$

$$f(9) = \frac{289 + 12}{298}$$

$$\leftarrow n = 5 \quad \checkmark$$

⑤

$$f(t) + f(-t) = \cancel{t^3} + \cancel{t} - \cancel{t^3} - \cancel{t} = 0$$

⑦

$$b = 3a \rightarrow \leftarrow b = 0 \rightarrow b = 5 \quad \leftarrow k = -1 \rightarrow k = -\frac{1}{3}$$

⑨

$$5 - 2 + \frac{1}{3} = \frac{8}{3}$$

$$m = 5$$

$$2 + n - (2\sqrt{2}) = 9\sqrt{2}$$

$$\rightarrow n = -2 + 11\sqrt{2}$$

$$m + n = 8 + 11\sqrt{2}$$

⑩