

8.2 | 연습문제 정답

2025. 3. 10 업데이트

01. $-2 \leq x \leq 2$

02. $-5 < x < 1$

03. $-1 \leq x < 1$

04. $\frac{3}{2} < x \leq \frac{5}{2}$

05. $\ln\left(\frac{1+x}{1-x}\right) = 2\left(x + \frac{x^3}{3} + \frac{x^5}{5} + \dots\right), \quad -1 < x < 1$

06. $\tan^{-1}(2x) = \sum_{n=0}^{\infty} \frac{(-1)^n}{2n+1} (2x)^{2n+1}, \quad |x| \leq \frac{1}{2}$

07. $x < -1$ 또는 $x > -\frac{1}{3}$

08. $\frac{x+x^2}{(1-x)^3} \quad (|x| < 1)$

09. 생략

10. $\sum_{n=1}^{\infty} nx^{n-1} = 1 + 2x + 3x^2 + \dots = \frac{1}{(1-x)^2} \quad (|x| < 1)$

11. $\frac{3}{4}$

12. $R=1$

13. $R=1$

14. $R=1$

15. $R=1$