

習題集 4

(對應 [張旭微積分](#) 積分前篇重點四：積分運算性質)

1. $\frac{13}{2}$;

2. $\frac{9}{2}$;

3. $\frac{29}{6}$;

4. 1;

5. 3, 2, -1;

$$6. f(x) = \begin{cases} -\frac{1}{2}, & 1 \leq x < 3 \\ 2, & 3 \leq x < 4 \\ -3, & 4 \leq x < 5 \\ 5, & 5 \leq x < 6 \\ -1, & 6 \leq x \leq 7 \end{cases}$$

7. 5, -1, -6;

$$8. f(x) = \begin{cases} 1, & 1 \leq x < 2 \\ -3, & 2 \leq x < 4 \\ 5, & 4 \leq x < 5 \\ -1, & 5 \leq x < 6 \\ 4, & 6 \leq x \leq 7 \end{cases};$$

9. No;

10. $\frac{\pi}{4}(\sqrt{2} + 1) \leq \int_0^{\pi} \sin dx \leq \pi - 1.$