

習題集 4 簡答

(對應 [張旭微積分](#) 極限篇重點四：極限運算定理 (四則運算篇))

1. $-2.9, 0.$

4. $\sin\left(\frac{\pi}{3} + x_0\right), \csc x_0, \frac{1}{2^n}.$

5. $\frac{\sin 1}{3}, \frac{2-\pi}{66\pi\sqrt{2}}, \text{ and } \frac{1}{2\sqrt{2}}.$

6. Evaluate $\frac{2^{x_0} + 2^{-x_0}}{2}, 0, \frac{-2}{\sin 1}.$

7. 1.

9. Not always true, for example, $f(x) = \begin{cases} 2 & \text{if } x > x_0 \\ -2 & \text{if } x < x_0 \end{cases}.$

10. No. (In fact, (\Rightarrow) is true, but (\Leftarrow) is false, for example, $f(x) = -2$)

註 [丈哥](#)有拍攝偶數題的講解影片，有需要的同學可以連接到張旭老師YT頻道的[播放清單](#)觀看！