

沒有星號題的答案見課本後面

### Section 1-3

課本 problem 21, 23, 32\*, 33, 41, 45

32 The  $(i, j)^{th}$  entry of  $(AB)^T$  is the  $(j, i)^{th}$  entry in  $AB$ , which is

$$\begin{aligned} & (j^{th} \text{ row of } A) \cdot (i^{th} \text{ column of } B) \\ &= (i^{th} \text{ column of } B) \cdot (j^{th} \text{ row of } A) \\ &= (i^{th} \text{ row of } B^T) \cdot (j^{th} \text{ column of } A^T) \end{aligned}$$

which is the  $(i, j)^{th}$  entry of  $B^T A^T$ . Since  $(AB)^T$  and  $B^T A^T$  have the same size, they are equal.

### Section 1-4

課本 problem 5, 27, 29, 35, 43, 49