1. 寫一個迴圈，執行下列一維陣列的操作。(40%)
   a) 從鍵盤讀取 20 個元素給 double 陣列 sales。
   b) 將 double 陣列 allowance 中的 75 個隨機亂數元素都各加上 1000。
   c) 將整數陣列 numbers 的 50 個元素都初始化為 0。
   d) 將整數陣列 GPA 的 10 個值{4.0, 4.2, 3.9, 3.5, 4.5, 3.8, 3.2, 4.9, 3.7, 3.8}列印成行的格式。

2. （集合的交集）使用一維陣列解決以下問題。讀取兩組數字，每組有 10 個數字。讀取完所有值後，顯示被兩組數字共用的唯一元素。(30%)

3. （擲骰子）撰寫一個 C 程式模擬投擲兩個骰子。你的程式應使用兩次 rand，以得到兩顆骰子投擲後的點數。然後計算出兩顆骰子的點數和。（請注意：由於一顆骰子可能擲出 1 到 6 點整數值，因此兩顆骰子的可能點數和為 2 到 12 點，其中 7 點最常出現，2 和 12 則是最不常出現的點數。）圖 6.23 列出了兩顆骰子的 36 種可能組合。你的程式應投擲這兩顆骰子 36,000 次。用一個一維陣列來記錄各種點數出現的次數。然後將結果以表列的方式印出來。此外，請判斷一下執行的結果是否合理，比如說，有 6 種可能組合會產生 7 點，所以出現 7 點的次數應該接近總投擲次數的六分之一。(30%)

	1	2	3	4	5	6
1	2	3	4	5	6	7
2	3	4	5	6	7	8
3	4	5	6	7	8	9
4	5	6	7	8	9	10
5	6	7	8	9	10	11
6	7	8	9	10	11	12

圖 6.23　骰子投擲結果

1. Write loops that perform each of the following one-dimensional array operations(40%)
   a) Read the 20 elements of double array sales from the keyboard.
   b) Add 1000 to each of the random 75 elements of double array allowance.
   c) Initialize the 50 elements of integer array numbers to zero.
   d) Print the 10 values {4.0, 4.2, 3.9, 3.5, 4.5, 3.8, 3.2, 4.9, 3.7, 3.8} of integer array GPA in column format.

2. ***(Intersection of Sets)*** Use one-dimensional arrays to solve the following problem. Read in two sets of numbers, each having 10 numbers. After reading all values, display the unique elements common to both sets of numbers. (30%)

3. ***(Dice Rolling)*** Write a program that simulates the rolling of two dice. The program should use rand to roll the first die, and should use rand again to roll the second die. The sum of the two values should then be calculate. [*Note:* Since each die can show an integer value from 1 to 6, then the sum of the two values will vary from 2 to 12, with 7 being the most frequent sum and 2 and 12 the least frequent sums.] Figure 6.23 shows the 36 possible combinations of the two dice. Your program should roll the two dice 36, 000 times. Use a single-subscripted array to tally the numbers of times each possible sum appears. Print the results in a tabular format. Also, determine if the totals are reasonable; i.e., there are six ways to roll a 7, so approximately one-sixth of all the rolls should be 7.

	1	2	3	4	5	6
1	2	3	4	5	6	7
2	3	4	5	6	7	8
3	4	5	6	7	8	9
4	5	6	7	8	9	10
5	6	7	8	9	10	11
6	7	8	9	10	11	12

Fig 6.23 Dice rolling outcomes