1. In array "double list[10]", list[i]=i+5.6, for i=0…9. And &(list[9]) is 0x456789 (14 pt)
   (A) What is *(list+4)? (6 pt)
   (B) What is (list+1)? (8 pt)

2. Transform postfix to prefix (14 分)
   (A) ab/c-de*+ac*- (7 pt)
   (B) abc+*d/g- (7 pt)

3. If moves is defined as: N be 0, NE be 1, E be 2, …, and NW be 7 in clockwise direction. Please draw out the path that the maze algorithm works. (14 pt)

entrance →

0	1	0	0	0	1	1	0	0	0	1	1	1	1	1
1	0	0	0	1	1	0	1	1	1	0	0	1	1	1
0	1	1	0	0	0	0	1	1	1	1	0	0	1	1
1	1	0	1	1	1	1	0	1	1	0	1	1	0	0
1	1	0	1	0	0	1	0	1	1	1	1	1	1	1
0	0	1	1	0	1	1	1	0	1	0	0	1	0	1
0	1	1	1	1	0	0	1	1	1	1	1	1	1	1
0	0	1	1	0	1	1	0	1	1	1	1	1	0	1
1	1	0	0	0	1	1	0	1	1	0	0	0	0	0
0	0	1	1	1	1	1	0	0	0	1	1	1	1	0
0	1	0	0	1	1	1	1	1	0	1	1	1	1	0

→ exit

4. By the way, if the size of maze is 9 by 7. What is the maximum path length for this maze? (7 pt)

5. In circular queues, when the queue becomes full and empty, front is equal to rear. How to avoid the confusion? (7 pt)

6. Calculate the values. (12 pt)
   (A) If a=4, b=6, c=9, then a+b*++c =? (6 pt)
   (B) If a=4, b=6, c=9, then a-b--*c =? (6 pt)

7. The numbers of terms in polynomials A and B are m and n, respectively. Calculate the values for polynomial additions. (20 pt)
   (A) What is the least number of coefficient additions? (5 pt)
   (B) What is the most number of coefficient additions? (5 pt)
   (C) What is the most number for creation of new nodes? (5 pt)
   (D) What is the most number for exponent comparisons? (5 pt)

8. Please complete the code of "Invert Single Linked Lists". (12 pt)

```
list_pointer invert(list_pointer lead)
{
    list_pointer middle, trail;
    .....
    .....
    .....
}
```