**Answer**

**#1 output**

Random value of V Address of V

Address of V Address of ptr2

Address of Arr1[0] Address of Arr1

Address of Arr1[2] Address of ptr1

Random value of V Address of V

Address of V Address of ptr2

Address of Arr1 Address of Arr1

Address of Arr2[2] Address of ptr1

**#2 output**

58 58 58

**#3 output**

K = 4

X =950

Y = 3000

K = 14

K = 28

**#4 output**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| line | values | | | |
| i | j | ptr | pptr |
| 4 | 5 | 10 | 0x37129 | wild |
| 5 | 5 | 10 | 0x37129 | 0x1fc825 |
| 6 | 3 | 10 | 0x37129 | 0x1fc825 |
| 7 | 7 | 10 | 0x37129 | 0x1fc825 |
| 8 | 7 | 10 | 0x5863a | 0x1fc825 |
| 9 | 7 | 9 | 0x5863a | 0x1fc825 |
| 10 | 7 | 9 | 0x37129 | 0x1fc825 |
| 11 | -2 | 9 | 0x37129 | 0x1fc825 |

**#5 output**

5 address of 5

5 address of 5 ,but incremented by 4

10 address of 10 ,but incremented by 4

10 address of 10

11 address of 11 They have the same address

12 address of 12

12 address of 12

**#6 and #7 output**

a[0]: 6

a[1]: 5

a[2]: wild

a[3]: 7

a[4]: wild

#8 output

Mark[0][2]:24

Mark[1][3]:30

Mark[2][2]:40

**Analyze the segment below and identify**

**Type of pointers**

The valid pointers are ordinary pointers(don't have a certain type), but we can classify them as int \*p1: Non-constant pointer to an integer (int\*), const int \*p2: Pointer to a constant integer (const int"), int "const p3: Constant pointer to an integer (int const). const int "const p4: Constant pointer to a constant integer (const int const).

**Invalid statements:**

\*p1=20 ( because assigning an integer (20) to a pointer (p1) is not allowed)

\*p2=50 (because p2 is a pointer to a constant integer so, the value it points to cannot be modified.)

p3=&y (because p3 is constant pointer so, its address cannot be changed) p4=&y (p4 is constant pointer so, its address cannot be changed)

\*p4 = 90 (because p4 is a pointer to a constant integer so, value it points to cannot be modified)