4.9.

Result:

0x61fe20 0x61fe14

1 0x61fe00 0x61fdf0

2

0x61fe20 is address of a[2]

0x61fe14 is address of array a

1 is distance between a[1] and array a.

0x61fe00 is address of b[2]

0x61fdf0is address of array b

2 is distance between b[2] and array b.

4.12:

1) Declare ex1 as pointer to char: char\* ex1;

2) Declare ex2 as pointer to pointer to char: char\*\* ex2;

3) Declare ex3 as array 10 of pointer to char: char\* ex3 = new char[10];

4) Declare ex4 as pointer to array 30 of char: char array[30];

char \*ex4 = array;

5) Declare ex5 as array 10 of pointer to array 500 of char: char array[500];

char \*ex5 = new char[10];

ex5 = array;

6) Declare ex6 as const pointer to int: int\* const ex6;

7) Declare ex7 as pointer to const int: const int \*ex7;

8) Write a function that takes a pointer to char named pc, and return it:

char getPC(char \*pc){

return (\*pc);

}

9) Write a function that takes a pointer to int named pi, and returns it as a pointer to float:

int getPi(int \*pi){

int \*pi2 = reinterpret\_cast<float>(&pi);

return \*pi2;

}

10) Write a function that takes a pointer to int named pi, and verifies if the value pointed to by pi is odd or even, and displays a message saying which one it is:

void checkPI(int \*pi){

if (\*pi % 2 == 0){

cout << “The value pointed to by pi is even” << endl;

cout << “Value: “ << \*pi << endl;

} else {

cout << “The value pointed to by pi is odd” << endl;

cout << “Value: “ << \*pi << endl;

}

11) Implement a dispatch table of three functions which print "Catfish", "chrisname" and

"devon revenge" and let the user choose which one to run by entering 1, 2 or 3:

void printCatfish(){ cout <<”Catfish”;}

void printChrisname(){ cout << “chrisname”;}\

void printDevonrevenge(){ cout << “devonrevenge”;}

void dispatchTable(){

int choice;

cout << “1. Print “Catfish””<<endl;

cout << “2. Print “Chrisname”” << endl;

cout << “3. Print “devon revenge”” << endl;

cout << “Your choice: “;

cin >> choice;

typedef void (\*MyFunctionPointer)();

MyFunctionPointer Table[] =

{

printCatFish,

printChrisname,

printDevonrevenge,

};

Table[choice - 1]();

}