

Programming 2  
Assignment using Call by Value and Call by Reference

Try to trace the program below manually first and then verify your answers by encoding the program and then execute it. Please be honest to yourself so that you can gauge if you understood the lesson or not. God bless everyone!

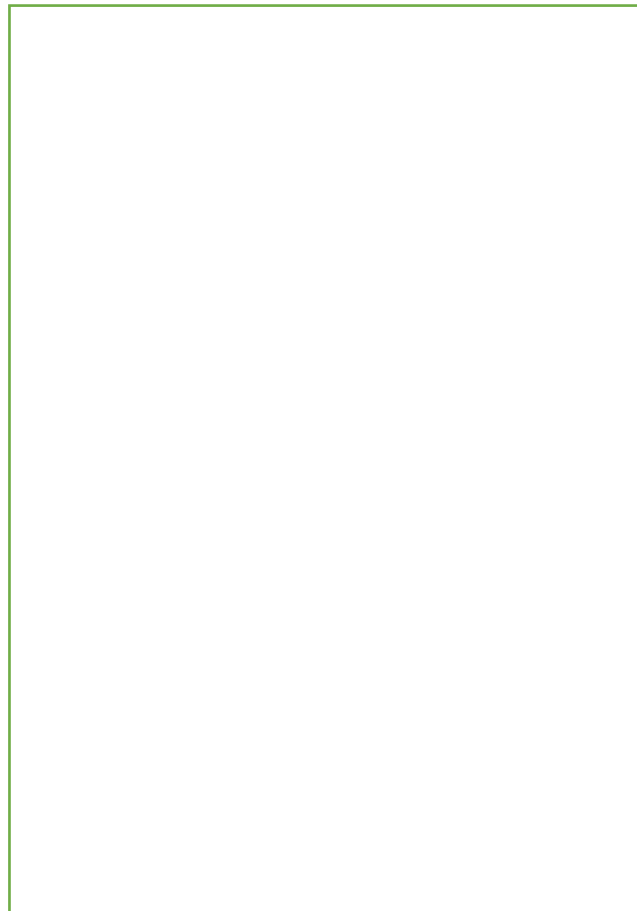
1. Write your answer inside the box provided.

```
#include<stdio.h>
#include<conio.h>
```

```
void func1(int x, int y, int z)
{
    x = 5; y = 2; z = 4;
    x++;
    y = x + z;
    z = z + y;
    printf("%3d%3d%3d\n", x,y,z);
}
```

```
void func2 (int x, int y, int z)
{
    x += 2;
    y = x + y;
    z = x + y;
    printf("%3d%3d%3d\n", x,y,z);
    func1(x,y,z);
    func1(z,x,y);
    printf("%3d%3d%3d\n", x,y,z);
}

main()
{ //clrscr();
  int x,y,z;
  x = 1; y = 2; z = 3;
  printf("%3d%3d%3d\n", x,y,z);
  func1(x,y,z);
  func2(x,y,z);
  func1(y,z,x);
  func2(z,z,z);
  printf("%3d%3d%3d\n", x,y,z);
  getch();
}
```



2. Write your answer inside the box provided

```
#include<stdio.h>
#include<conio.h>

int x=5, y=9, z=7;

int funct1( int x, int y, int z)
{   z = x+y;
    return z;
}

int funct2(int *x, int *y, int *z)
{ *z = *x + *y;
  return *z;
}

int funct3(int *x, int y, int *z)
{ y = *x + *z;
  return y;
}

main()
{ printf("%5d%5d%5d\n", x,y,z);
  printf("%5d%5d%5d\n", x,y,funct1(x,y,z));
  y = funct2(&x,&y,&z);
  z = funct1(x,y,z);
  printf("%5d%5d%5d\n", x,y,z);
  x = funct3(&y,z,&x);
  z = funct1(x,y,z);
  printf("%5d%5d%5d\n", x,y,z);
  x = funct1(z,z,z);
  y = funct2(&y,&x,&z);
  z = funct3(&x,y,&z);
  printf("%5d%5d%5d\n", x,y,z);
  y = funct3(&y,x,&z);
  x = funct1(x,y,z);
  printf("%5d%5d%5d\n", z,y,x);
  return 0;
}
```