Name _____ Period_____

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1. Refer to the code below to complete the following.

```java
public class Tester {

    public static void main(String[] args){
        double b[] = new double[10];
        b[3] = 19;
        BankAccount myAccount = new BankAccount(79); //sets balance to 79
        int y = 39;
        method1(y, b, myAccount);
        BankAccount anotherAccount = myAccount;
        anotherAccount.deposit = 200;// adds 200 to the balance
        System.out.println(y + " " + b[3] + " " + myAccount.balance);
    }

    public static void method1(int x, double a[], BankAccount theAccount){

        x = 332;
        a[3] = -54;
        theAccount.balance = 702;
    }
}
```
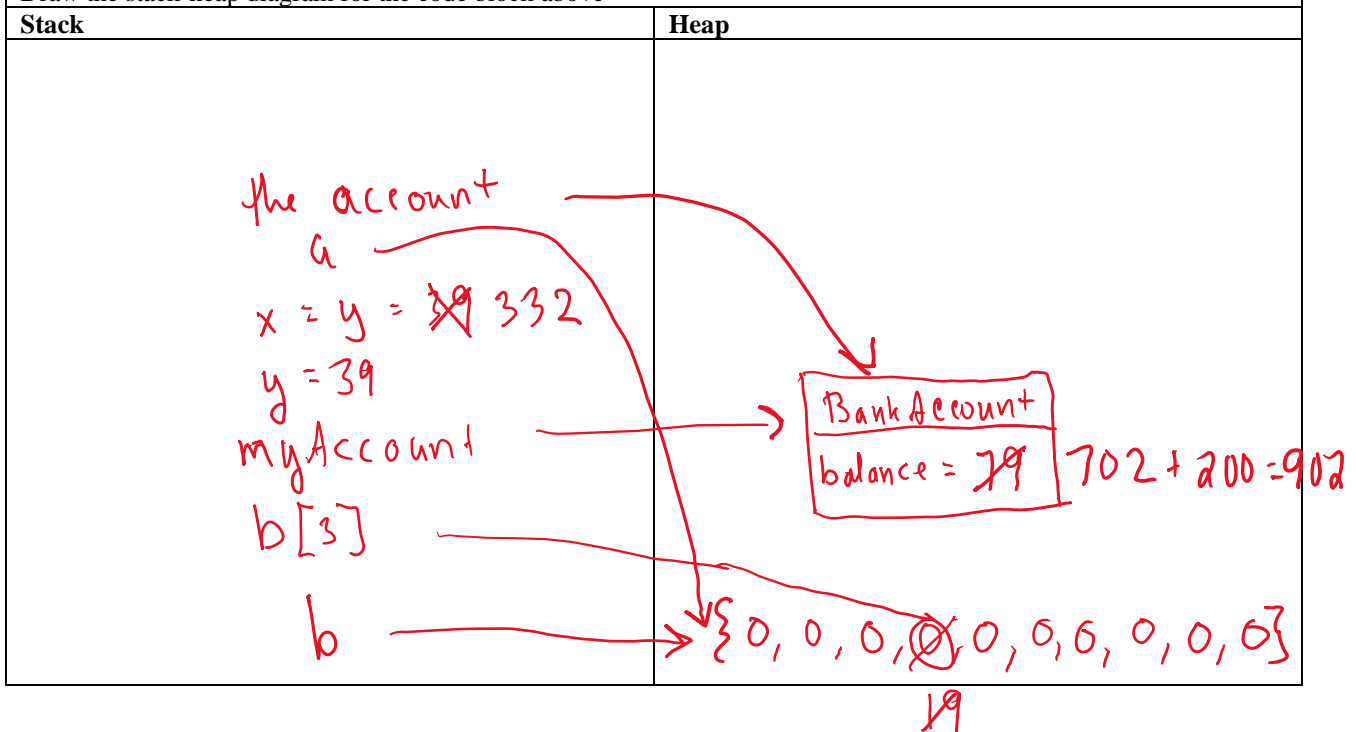
Draw the stack-heap diagram for the code block above

Stack	Heap

the account
a
x = y = 39 332
y = 39
myAccount
b[3]
b

BankAccount
balance = 79 702 + 200 = 902

{0, 0, 0, 0, 0, 6, 0, 0, 0}
19
-54

_____/25

Indicate what is printed

39   - 54   902

2. Refer to the code below to complete the following.

```java
public static void main(String args[]{
  int s[] = {1,2,3,4,5,6};

  for(int g = 0; g < s.length; g++)
     System.out.print(s[g] + " ");

  System.out.print("\n");
  testMethod(s);

  for(int g = 0; g < s.length; g++)
     System.out.print(s[g] + " ");
}//end main
```

```java
public static void testMethod(int pp[]){
  int len = pp.length;
  int t2[] = new int[len/2];
  int i = 0;

  for(int j=0; j<len/2; j++){
     i+=2;
     t2[j] = pp[i-1];
  }
  for(int k=0; k<t2.length; k++)
      System.out.print(t2[k] + " ");

  System.out.print("\n");
  pp = t2;
}//end testMethod
```

Draw the stack-heap diagram for the code block above

Stack	Heap

int i = 0 2
t2 ———————
int len = 6
PP
S

1 3 5
{ 0, 0, 0 }

{1, 2, 3, 4, 5, 6}

Indicate what is printed

1 2 3 4 5 6
1 3 5
1 2 3 4 5 6

3. Refer to the code below to complete the following.

```java
public class Tester
{
    public static void main(String args[])
    {
        int [] prf = {13,22,89,15};
        double d = 30.89;
        Circle myCir = new Circle(18);
        myCir.rad = 14;
        fg(prf, d, myCir);

        System.out.println(d);          //30.89
        System.out.println(prf[2]);     //16
        System.out.println(myCir.rad);  //122
    }

    public static void fg(int [] x, double d, Circle c)
    {
        d++;
        x[2] = 16;
        c.rad = 122;
        System.out.println(d++);   // 31.89

        int nn[] = new int[x.length];
        nn[3] = x[0];
        x = nn;
    }
}
```

(handwritten annotations):

nn → {0, 0, 0, 13}

d

d = d = 31.89 / 30.89 ✗

myCir → [Circle | rad = 18] 122 / 14

d = 30.89

prf → {13, 22, 89, 15} 16

(a) What is the output of
System.out.println(d); in main?

30.89

(b) What is the output of
System.out.println(prf[2]); in main?

16

Score _____/25

(c) What is the output of
System.out.println(myCir.rad); in *main?*

122

(d) What is the output of println in the fg method?

31.89

/4

Score _____/25