AP Computer Science - Follow the Method Assignment

Directions In each of the following programs, you are to follow the logic of the program to determine the output. In each answer, you must show your work in the top big box and display the output in the bottom, smaller box.

public class MethodFollow1 {

public static void main(String[] args) {

 System.out.println( tripleIt ( biggestFactor ( 24 )));

 }

public static int biggestFactor(int num){

 for(int x = num-1; x>=1; x--)

 {

 if(num % x == 0) return x;

 }

 return -1;

}

public static int tripleIt(int num){

 return num \*3;

}

public class MethodFollow2 {

 public static void main(String[] args) {

 if( isEven ( sumTo10 ( 3\*5))) System.out.println("Yes");

 else System.out.println("Nope.");

 }

public static boolean isEven(int num){

 if(num % 2==0) return true;

 else return false;

 }

public static int sumTo10(int num){

 int sum=0;

 if (num <10)

 {

 for(int x=num; x<=10; x+=2)

 sum +=x;

 }

 else

 {

 for(int x=num; x>=10; x-=2)

 sum +=x;

 }

 System.out.println(sum);

 return sum;

}

public class MethodFollow3 {

 public static void main(String[] args) {

 int x = mystery(4, true);

 if( isBig ( x)) System.out.println( decrease (x));

 else System.out.println( increase (x));

 }

public static boolean isBig(int x)

{

 return x >=100;

}

public static int mystery(int num, boolean check)

{

 if(check)

 {

 return (int) Math.pow(num, num-1);

 }

 else return (int)Math.pow(num-1, num);

}

public static int increase(int num)

{

 return num \*2 +3;

}

public static int decrease(int num)

{

 return (int) (num/2) -5;

}

public class MethodFollow4 {

public static void main(String[] args) {

 double num = tweak(set("tiger"));

 System.out.println(num);

 }

public static int set(String st)

{

 return st.length() +2;

}

public static double tweak(int num)

{

 double d = num / 8.0;

 return d;

}

public class MethodFollow5 {

public static void main(String[] args) {

 String st = create();

 change(st);

 System.out.println(st);

 }

public static String create()

{

 String str = "supercalifragilistic";

 str= str.substring(0, 2) + str.charAt(12) + str.charAt(6)+ str.charAt(4);

 return str;

}

public static void change(String st)

{

 st += " cane";

}

public class MethodFollow6 {

public static void main(String[] args) {

 if(isSame(alter(6), manipulate(9))) System.out.println("A");

 else if (isSame(alter(7), manipulate(5))) System.out.println("B");

 else if (isSame(alter(13), manipulate(10))) System.out.println("C");

 else System.out.println("D");

 }

public static boolean isSame (int a, int b)

{

 return a==b;

}

public static int alter(int num)

{

 return 100 % num;

}

public static int manipulate(int num)

{

 return num-1;

}