Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Intro to While-Loops**

[ /40 marks – T]

1. Type the program into Dr. Java, compile and run.

public class WhileLoop1{

public static void main (String[] args){

int count = 0;

while (count < 10){

System.out.println(count);

count++;

}//end while loop

}

}

1. What is the output?   
     
   count from 0 to 9\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. How many times does this program loop?   
     
   it loops 10 times\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Type the program into Dr. Java, compile and run.

public class WhileLoop2{

public static void main (String[] args){  
 int t=0;

while (t <= 10){  
 t++;

System.out.println(t);

}//end while loop

}

}

1. What is the output?   
     
   (error because missing semicolon) else 1 to 11 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. How many times does this program loop?  
      
   it loops 10 times \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Fill in the blank to output the numbers 5 to 20  
   public class WhileLoop3{

public static void main (String[] args){

int cNum = 5;

while (cNum <= 20){

System.out.println(cNum);

cNum ++;

}//end while loop

}

}

1. Fill in the blank to output the numbers between 5 and 100 by multiples of 5. (e.g. 5 10 15 20 …etc)  
   public class WhileLoop4{

public static void main (String[] args){

int i = 5;

while (i <= 100){

System.out.println(i);

i += 5;

}//end while loop

}

}

1. Fill in the blank to output the numbers 20 to 5  
   public class WhileLoop5{

public static void main (String[] args){

int number = 20;

while (number >= 5){

System.out.println(number);

number--;

}//end while loop

}

}

1. Identify the following parts of the program:

int count=0;  
while (count <= 100){

System.out.println(count);  
count += 3;

}//end while loop

* 1. What piece of Java code initializes/ gives the starting number for the while-loop?

Int count = 0\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* 1. What piece of Java code tells the while-loop when to stop?

Count <= 100\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* 1. What piece of Java code tells the while-loop how much to increment or decrement by?

count += 3; \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* 1. Fill in the Flowchart for the code in question 6





1. How many times will the following pieces of code loop?:  
   int x=1

while (x < 6){

System.out.println(x);   
 x++;

}//end while loop

Number of iterations 6

There are 5 iterations\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

int y=-20  
while (y < 10){

System.out.println(y);   
 y = y +10;

}//end while loop

Number of iterations

There are 3 iterations\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

int w=-3;

while (w <= 10){

System.out.println(w);   
w++;

}//end while loop

Number of iterations

There are 14 iterations\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

int a=2

while (a < 2){

System.out.println(a);   
a++;

}//end while loop

Number of iterations

There are zero iterations\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

int b=10;

while (b > -3){

System.out.println(b);   
b--;

}//end while loop

Number of iterations

there are 13 iterations\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

int b=1;

while (b < 100){

System.out.println(count);   
b=b\*3;

}//end while loop

Number of iterations

Displays five iterations\_\_\_\_\_\_\_\_\_\_(error)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Convert the following For-Loop into a While-Loop

|  |  |
| --- | --- |
| For | While |
| for (int x=1; x < 10; x++){  System.out.println(x);  }//end for | Int x = 1;  While (x< 10)  {  System.out.println(x);  X++;  } |
| for (int y=1; y < 10; y = y +10){  y = y +4;  System.out.println(y);  }//end for | Int y = 1  While (y < 10)  {  y+= y  system.out.println(y);  y + 10;  } |
| for (int b=10; b > -3; b--){  if (b%2==0){  System.out.println(“even num”);  }else{  System.out.println(“odd num”);  }  }//end for | Int b = 10;  While (b > -3)  {  While (b%2==0)  {  System.out.println(“even num”);  }  While (b%2==1)  {  System.out.println(“odd num”);  }//end for |

1. Type the program into Dr. Java, compile and run.

|  |  |
| --- | --- |
| int b=9;  do{  System.out.println(b);  b--;  }while(b>10); | int b=9;  while(b>10){  System.out.println(b);  b--;  } |
| What is the output?  9 | What is the output?  nothing |

1. What is the difference between a *Do-While-Loop* and a *While-Loop*?   
     
   do while loop executes the command before checking the while statement, while loops check the condition before running the command\_\_\_\_\_\_\_
2. Fill in the flowchart for the While-Loop

Start

End

1. Fill in the flowchart for the Do-While-Loop above













