

Java
while loop worksheet #6

Name –
Period -

Trace the following loops with columns for each variable & circling the last value. Show the output in the rectangles. Write "compile error", "runtime error" or "infinite loop" where appropriate. The ++ operator adds one, the -- operator subtracts one and the % operator means modulus (like Mod in VB). The ! operator means Not, the != means "not equal to", & the == operator means "equal to". Note that these code segments do not necessarily use good style & follow our Coding Standards. Note that if statements in Java work like they do in VB but skim the if statements lecture notes for help if necessary. Be wary of integer division in Java which occurs when an integer such as 3 is divided by 2 the result is truncated to 1 instead of 1.5.

1.
int num = 0;
while (num <= 5)
{
 System.out.println(num);
 num += 2;
}

num
2
4
6

0
2
4

2.
boolean finished = false;
int num = 0;
while (!finished)
{
 num += 1;
 if (num % 5 == 0)
 finished = true;
 num += 201;
}
System.out.println(num);

finished
false
false
false
false
true

num
202
404
606
808
1010

1010

3.
int num = 0;
int sum = 3;
while (num != -9 && sum < 100)
{
 num = *value inputted by user*; // 3, 2, 4, -9 will be inputted
 sum += num;
}
System.out.println(sum);

num

sum

4.
int num = 123;
int rev = 0;
while (num > 0) {
 rev *= 10;
 rev = rev + num % 10;
 num /= 10;
}System.out.println(rev);

num

rev

5.
int num = 5; int dum = 4;
while (num > 4 && dum < 10)
{
 num++; dum = num;
}
System.out.println(num + "-" + dum);

num

dum

6.
int num = 5;
while (num > 4)System.out.println(num);

num

infinite loop, num
is not being
changed