# BJP5 Self-Check 4.24: secondHalfLetters

Language/Type: 

Java char method basics String

Author: 

Marty Stepp (on 2019/09/19)

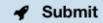
Write a method named secondHalfLetters that accepts a string as its parameter and returns an integer representing letters in the string come from the second half of the alphabet (that is, have values of 'n' through 'z' inclusive). Compainsensitively, such that uppercase values of 'N' through 'Z' also count. For example, the call

secondHalfLetters ("ruminates") should return 5 because the 'r', 'u', 'n', 't', and 's' come from the second phabet. You may assume that every character in the string is a letter.

```
Type your solution here:
```

```
1 public int secondHalfLetters(String a){
       int count = 0;
3
       int amount = 0;
4
 5
       while (count < a.length()){</pre>
 6
           if (Character.toLowerCase(a.charAt(count)) >= 'n') {
 7
                amount ++;
8
           }
9
           count++;
       }
10
11
       return amount;
12 }
```

This is a method problem. Write a Java method as described. Do not write a complete program or class; just the method(s) above.



# You passed 7 of 7 tests.

Go to the next problem: printTriangleTypePreconditions

```
test #1: secondHalfLetters("ruminates")
return: 5
result: ⊙ pass

test #2: secondHalfLetters("mississippi")
return: 6
return: 6
```

## BJP5 Exercise 5.3: toBinary

Language/Type: 4 Java binary numbers method basics mod while

Author: Leslie Ferguson (on 2019/09/19)

Write a method named toBinary that accepts an integer as a parameter and returns a string of that number's representation in binary. For example, the call of toBinary (42) should return "101010".

```
Type your solution here:
   public static String toBinary(int num){
    String result = "";
       String binary = "";
 4
 5
       if (num == 0)
 6
            result = result + 0;
 8
       while (num != 0){
 9
            result = result + (num % 2);
10
            num = num/2;
11
       }
12
13
       for (int i = result.length() - 1; i \ge 0; i--){
14
            binary = binary + result.charAt(i);
15
16
17
        return binary;
18 }
```

This is a method problem. Write a Java method as described. Do not write a complete program or class; just the method(s) above.



■ 4 Indent

Sound F/X

✓ Highlighting

## You passed 5 of 5 tests.

Go to the next problem: randomX

```
test #1: toBinary(44)
return: "101100"
result: ⊙ pass

test #2: toBinary(0)
```

# O BJP5 Self-Check 5.1: whileLoops

Language/Type: 

Java basics while loops

Author: Will Beebe (on 2019/09/19)

For each of the following while loops, how many times will the loop execute its body? Remember tha "unknown" are legal answers.

```
int x = 1;
 while (x < 100) {
     System.out.print(x + " ");
     x += 10;
 }
 int max = 10;
 while (max < 10) {
     System.out.println("count down: " + max);
     max--;
 }
 3.
 int x = 250;
 while (x % 3 != 0) {
     System.out.println(x);
 4.
 int x = 2;
 while (x < 200) {
     System.out.print(x + " ");
      x *= x;
 }
 String word = "a";
 while (word.length() < 10) {
     word = "b" + word + "b";
 System.out.println(word);
 int x = 100;
 while (x > 0) {
     System.out.println(x / 10);
     x = x / 2;
 }
1.
     18
Ζ.
3.
      infinity
4.
5.
6.
```

## You passed 6 of 6 tests.

Go to the next problem: forToWhile

	#	question	your answer	result
	1	1.	10	pass
ı		_	-	

### BJP5 Self-Check 5.3: whileLoopMystery1

```
Given the following method:
public static void mystery(int x) {
   int y = 1;
int z = 0;
   while (2 * y <= x) {
      y = y * 2;
       z++:
   System.out.println(y + " " + z);
```

Write the output of each of the following calls.

```
mystery(1);
              1 0
mystery(6);
              4 2
mystery(19);
              16 4
mystery(39);
              32 5
mystery(74);
              64 6
```

### You passed 5 of 5 tests.

Go to the next problem: whileLoopMystery2

#	question	your answer	result
1	mystery(1);	1 0	pass
2	mystery(6);	4 2	pass

## O BJP5 Self-Check 5.4: whileLoopMystery2

```
Language/Type: 
4 Java mystery while loops
Leslie Ferguson (on 2019/09/19)
Given the following method:
public static void mystery(int x) {
      int y = 0;
while (x % 2 == 0) {
           y++;
x = x / 2;
      System.out.println(x + " " + y);
}
```

Write the output of each of the following calls.

mystery(19);	19 0
mystery(42);	21 1
mystery(48);	3 4
mystery(40);	5 3
mystery(64);	1 6

Submit

## You passed 5 of 5 tests.

Go to the next problem: randomRangeABCDE

#	question	your answer	result
1	mystery(19);	19 0	pass
2	mystery(42);	21 1	pass

## BJP5 Exercise 5.18: digitSum

Language/Type: 4 Java method basics mod Marty Stepp (on 2019/09/19) Author:

Write a method named digitSum that accepts an integer as a parameter and returns the sum of example, digitSum(29107) returns 2+9+1+0+7 or 19. For negative numbers, return the same were positive. For example, digitSum(-456) returns 4+5+6 or 15.

### Type your solution here:

```
public static int digitSum(int x){
 1
       x = Math.abs(x);
3
       int sum = 0;
4
 5
       while (x > 0){
 6
           sum = sum + (x%10);
 7
           x = x/10;
       }
8
9
10
       return sum;
11 }
```

This is a method problem. Write a Java method as described. Do not write a complete program or class; just the method



## You passed 11 of 11 tests.

Go to the next problem: firstDigit

```
test #1: digitSum(29107)
return: 19
result: @ pass
```