



1 / 1
points

1. Which one of the following is the first gene for this strand of DNA where you want to consider all three of the stop codons?

“AATGCTAACTAGCTGACTAAT”

- ☐ ATGCTAA
- ☐ ATGCTA
- ☐ ATGCTAACTAG
- ☐ CTAACTAGC
- ☐ The empty string
- ☒ ATGCTAACTAGCTGA

Correct
This is the correct answer.



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points

2. Consider the following code segment to count the number of times the string “TG” occurs in the string dna, that does not work correctly.

```
1 String dna = "CTGCCTGCATGATCGTA";
2 int pos = dna.indexOf("TG");
3 int count = 0;
4 while (pos >= 0) {
5     count = count + 1;
6     pos = dna.indexOf("TG", pos);
7 }
8 System.out.println(count);
```

Which of the following best describes the error?

- ☒ Each time pos is reset in the while loop it finds the same “TG”.

- Correct**
Correct!
- ☐ The two lines in the body of the while loop should be swapped so the count happens after pos is given a new value.
 - ☐ The variable pos should be initialized to 0 in line 2 and only set with indexOf inside the while loop.
 - ☐ The count is off by 1. The count should be initialized to 1 to take into account the first “TG” that is found.



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3. Consider the following segment of code from a program.

```
1 while (count < 3) {
2     count += 1;
3     newDna = newDna + dna.substring(startPos,pos);
4     startPos = pos+1;
5     pos = dna.indexOf("T", startPos);
6     if (pos == -1) {
7         break;
8     }
9 }
```

How many different ways are there to break out of this loop?

- ☒ 2

- Correct**
Correct!
- ☐ 0, it is an infinite loop
 - ☐ 1
 - ☐ 3



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4. Which one of the following conditionals correctly evaluates to true if the integer num is an odd number and to false if it is an even number.

- ☒ `1 if ((num % 2 == 1))`

Correct
Correct!

- ☐ `1 if ((num % 2 == 0))`
- ☐ `1 if ((num % 2 == (num+1) % 2))`
- ☐ `1 if ((num % 2 == num % 2))`