

13 Questions

Total Marks: 56.0

9 Multiple Choice Questions

1. Suppose there is a class called Employee. Is it possible to ...

+ 2.0
2. Suppose there is a class called Employee. Is it possible to ...

+ 2.0
3. Given the following piece of code, which of the following operations...

+ 3.0
4. Which of the classes given below relies upon its subclasses for...

+ 2.0
5. In Java, the methods declared as _____ cannot...

+ 1.0
6. How many join conditions are required to join four tables in...

+ 2.0
7. Which of the following commands is used to remove an index from...

+ 2.0
8. Which of these is not a type of SQL constraint?

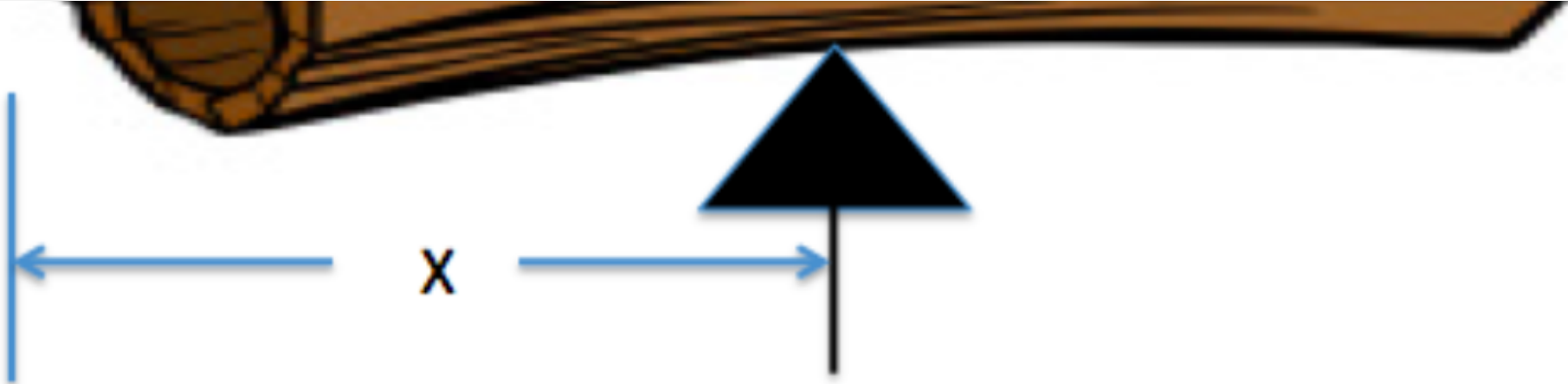
+ 1.0
9. In SQL, which of the following statements is used to end the...

+ 1.0

2 Programming Questions

10. Stock Price Statistics

+ 20.0



You need to write a function `balancePoint()`, that returns the point at which the log balances itself evenly. The weight of the log should be exactly divided in half at this point. Since the log is not uniform, this may not be the mid-point of the Log.

Interface `Log` contains the following methods:

All points are represented by their distance from the left end of the log, as depicted in the diagram.

```
double weightUpto(double x); // returns the weight of the part of the log from the left end, upto distance x.

double length(); // returns the total length of the log
```

You need to write the following function:

```
double balancePoint(Log log) {
    // Returns the distance from the left end, at which the log is balanced
}
```

Your answer should be accurate to three digits after decimal point (or maximum error should be 0.001).

NOTES : 1. Your code should work for any new Log types that are added. 2. Algorithm with better time-complexity gets extra credit. 3. If you have used `System.out.println` statements in your code, please remove them before submitting code, as they cause test cases to fail.

Write your code in the block with comment `** YOUR CODE HERE**`

Sample Input 🔗

```
LINE 20 5 10
SINE 10
```

Sample Output 🔗

```
9000
5461
```

Note: Your code should be able to convert the sample input into the sample output. However, this is not enough to pass the challenge, because the code will be run on multiple test cases. Therefore, your code must solve this problem statement.