Do you consider writing unit tests as equally important as writing production code?

Select one:

- O No, production code is more important. Unit tests are only needed if the production code if of poor quality
- O No, production code is more important. Unit tests should only be created if time allows for that.
- O Yes because the only way to easily maintain correctly working production code is by having a lot of unit tests for it.
- **V** Yes and production code must be 100% covered with unit tests.

We've decided to override equals() method. And hashCode() made a constant value e.g. (return 1;) What will be in this case?

Select one:

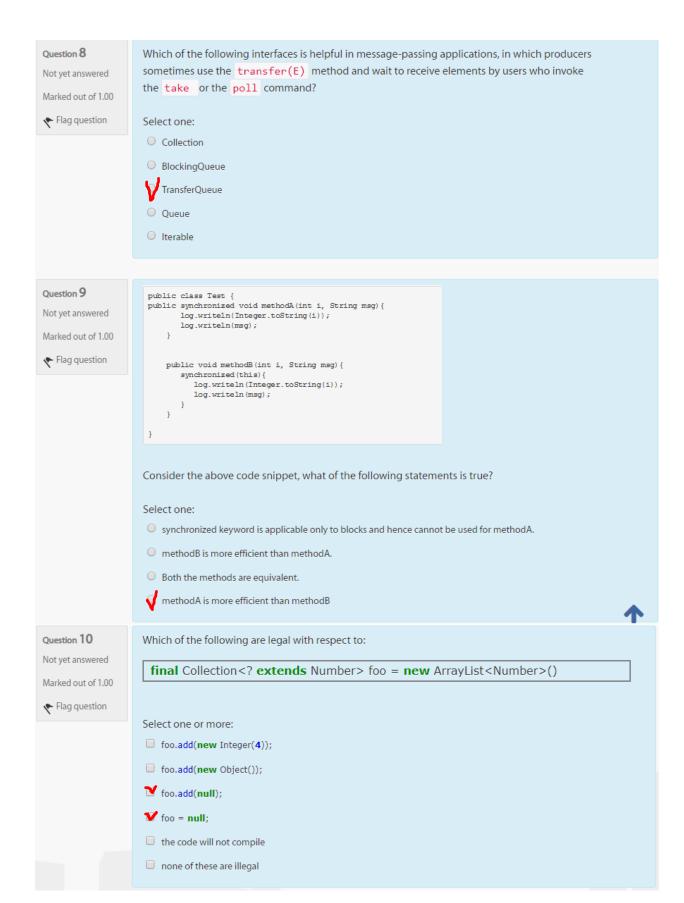
- Compilation error
- Run-time exception
- No impact
- HashMap with such keys will handle only one element



Time to get element from HashMap will be longer

Question 3 Which are legal Java statements from the following? Not yet answered 1. int num = (int)50.05L; 2. byte x = (byte)50L; Marked out of 1.00 3. long y = (byte)50; Flag question 4. byte z = (byte)50L; Select one: 1 and 2 2 and 3 2, 3 and 4 All statements are correct. Question 4 Which of the below statements are true about ArrayList and Vector in Java? Not yet answered Select one: Marked out of 1.00 Vector can be resized while ArrayList cannot be Flag question ✔ Vector is synchronized while ArrayList is not On ArrayLists can grow but cannot shrink in size, while Vector can both grow and shrink Vectors allow duplicate values while ArrayList doesnot Question 5 You have the following code in a file called Test.java Not yet answered class Base { Marked out of 1.00 public static void main(String[] args){ System.out.println("Hello"); Flag question public class Test extends Base{} What will happen if you try to compile and run this? Select one: Fails to compile Runtime error Compiles and runs with no output Prints "Hello"

Question 6 Which of the following is an example of an inline Javadoc tag? Not yet answered Select one: Marked out of 1.00 O <@code> Flag question /*@code*/ {@code} ocode /@code/ ${\sf Question}\, 7$ Which of the following options best describes the output of the code shown below? Not yet answered Object obj1 = new Object(); Marked out of 1.00 Object obj2 = new Object(); System.out.print("result: "); Flag question System.out.print((obj1 == obj2) + " "); System.out.print(obj1.equals(obj2) + " "); obj1 = obj2; System.out.print(obj1.equals(obj2) + ""); Select one: result: false false true result: true false true result: true false false result: false false false None of the above; an error occurs.



Not yet answered

Marked out of 1.00

Flag question

Which data structure can be used for storing a set of integers such that each of the following operations can be done in O(log N) time, where N is the number of elements?

- deletion of the smallest element
- insertion of an element if it is not already present in the set

Select one:

- A heap can be used, but not a balanced binary search tree
- A balanced binary search tree can be used, but not a heap



Neither balanced binary search tree nor heap can be used

Question 12

Not yet answered

Marked out of 1.00



Which of the following prefixes can be added to a number in order to indicate a binary literal?

Select one or more:





OA

0S

0s

Question 13

Not yet answered

Marked out of 1.00

Flag question

Five threads are accessing a shared resource.

The common variable being accessed by all Threads is 'x' and the common code being executed by them is:

```
for ( int i = 0; i < 10000000; i++ )
   x = x + 1;
```

Assuming that the original (initial) value of 'x' was zero, after each of the threads have finished running this loop, the value of 'x' is:

Select one:

- 50000000
- 0 10000000
- A specific value F, less than 50000000; which remains fixed across multiple runs.
- A specific value F, greater than 50000000; which remains fixed across multiple runs.

The value may differ/vary each time, across runs.

Not yet answered

Marked out of 1.00

Flag question

You have the following code in a file called "Gcd.java":

```
public class Gcd {
   private static int first(int a, int b) {
      if (b == 0) {
        return a;
      }
}
               } else {
   return second(b, a - b);
       private static int second(int a, int b) {
   if (a == 0) {
      return b;
               } else {
    return first(b, a);
       public static void main(String[] args) {
    System.out.println(first(5, 3));
```

What will happen if you try to compile and run this?

Select one:

- The code fails to compile.
- "1" will be printed to standard output.
- "-1" will be printed to standard output.



A StackOverflowError will be thrown.

Question 15

Not yet answered

Marked out of 1.00

Flag question

Given the following class which updates a map, what risks exist when multiple threads instantiate and call the methods on the instance?

```
class Updater {
   static volatile Map<String, String> m;
   public synchronized void update(String k, Integer v) {
       if (m == null) {
           m = new HashMap<>();
       Integer pv = m.getOrDefault(k, 0);
       m.put(k, pv + v);
   public synchronized int calculateSum() {
       int sum = 0;
       for (Integer v : m.entries()) {
           sum += v;
       return sum;
}
```

Select one or more:

- The field m might be initialized more than once
- A call to calculateSum could enter an infinite loop
- A call to **update** may throw a runtime exception



A call to calculateSum may throw a runtime exception



The use of synchronized protects against threading issues.

Not yet answered

Marked out of 1.00

Flag question

A situation where a bunch of threads cannot gain regular access to shared resources is described as:

Select one:

- Race conditions
- Livelock
- Deadlock



Question 17

Not yet answered

Marked out of 1.00

Flag question

You see a colleague write the following code, stating that since JDK1.6+ replaces string concatenation with StringBuilder, he does not need to use the append method. What are your thoughts?

```
String s = "";
for (int i = 0; i < 100; i++) {
    s += String.valueOf(i);
}</pre>
```

Select one:

- O He is correct, append should be reserved for situations where the builder object is long lived.
- He is forgetting that the java compiler can only replace + with append for string literals
- He is forgetting that the java compiler will not optimize the use of + across loop iterations.
- O He is correct, the JIT compiler will optimze this code to be identica to StringBuilder and his code is more readable

Not yet answered

Marked out of 1.00

Flag question

How to make a custom type support for "foreach" syntax?

Select one:

- It is not possible using foreach within custom classes
- Extending from an existing java container type, e.g java.util.Map



Implementing from java.lang.lterable

Implementing from java.util.lterator

Question 19

Not yet answered

Marked out of 1.00



Suppose there is a class named MyUser.@PersistenceUnit is already injected, which produces an EntityManagerFactory emf. Which of the following statements, when inserted into the method body, will retrieve the values from the database using Java Persistence API 2, and retrieve the 0th element from the list?

Select one:

- MyUser user = (MyUser)emf.createEntityManager().createQuery("SELECT u FROM MyUser u").getResultList();
- MyUser user = (MyUser)emf.createEntityManager().createQuery("SELECT u FROM MyUser u").setResultList(0);
- MyUser user = (MyUser)emf.EntityManagerFactory().createQuery("SELECT u FROM MyUser u").get(0).getResultList();
- MyUser user = (MyUser)emf.createEntityManager().createQuery("SELECT u FROM MyUser user").getResultList().get();



 $MyUser\ user = (MyUser)emf. createEntityManager(). createQuery("SELECT\ u\ FROM\ MyUser\ u"). getResultList(). get(0);$



Question 20

Not yet answered

Marked out of 1.00



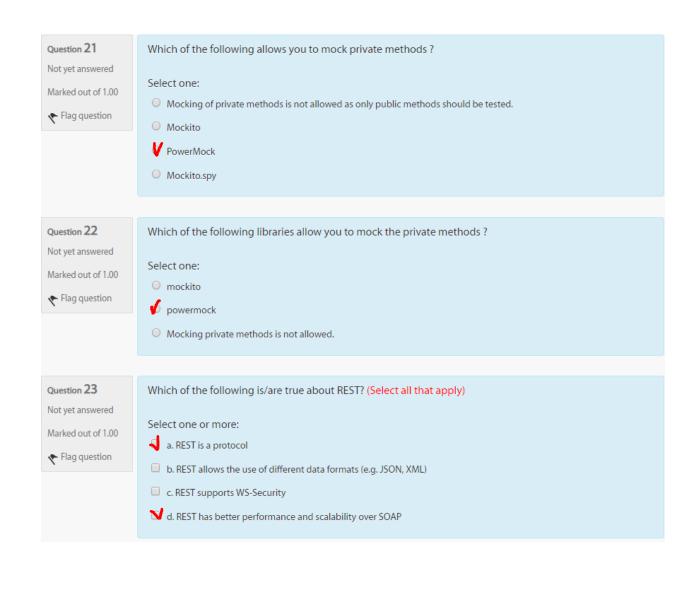
Which of the following items is true for functional interfaces:

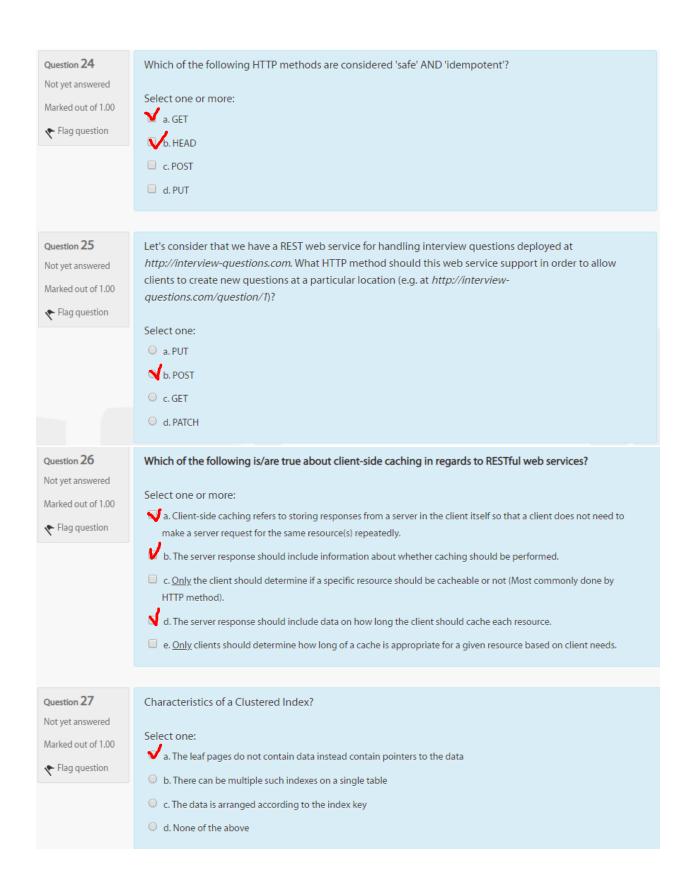
Select one:



√ Must have exactly one abstract method

- Can have multiple abstract methods
- Must provide a default method
- Must have exactly one concrete method





Not yet answered

Marked out of 1.00

Flag question

```
Consider the this materialized view using DBMS_MVIEW.PMARKER function
```

```
CREATE MATERIALIZED VIEW sales Product mv
BUILD DEFERRED
REFRESH FAST ON DEMAND
ENABLE QUERY REWRITE AS
SELECT DBMS MVIEW.PMARKER(p.rowid), t.calendar yr, p.product cat, COUNT(*),
     SUM(s.unit_price), SUM(s.units_sold),
     COUNT (s.unit_price), COUNT (s.units_sold)
FROM FCTsales s, Dimtime t, Dimproduct p
WHERE s.product_id = p.product_id AND s.time_id = t.time_id
GROUP BY DBMS MVIEW.PMARKER (p.rowid), p.product cat, t.calendar yr;
```

Which statement below is not correct?

Select one:

- a. This materialized view contains DBMS_MVIEW.PMARKER function on Dimproduct in Select statement.
- b. Partition Change Tracking is enabled on DimProduct table only.
- o. Use of DBMS_MVIEW.PMARKER function allows the cardinality of this materialized view to be increased only by number of partitions in DimProduct table.
- d. As presence of Calender_Yr join dependant expression in Select, PCT is enabled on FCTSales table.

Question 29

Not yet answered

Marked out of 1.00

Flag question

We can say from the 2 queries below that:

/* SQL Query */

SELECT Customer.CustNum, Customer.Name, Customer.ZipCode, Order.OrderNum, Order.OrderDate FROM Customer, Order

WHERE Customer.CustNum = Order.CustNum

ORDER BY Customer.ZipCode;

/* ABL Query */

FOR EACH customer

, FIRST Order WHERE Order.CustNum = Customer.CustNum

BY Customer.ZipCode:

DISPLAY Customer.CustNum Customer.Name Customer.zipCode Order.OrderNum Order.OrderDate. END.

Select one or more:

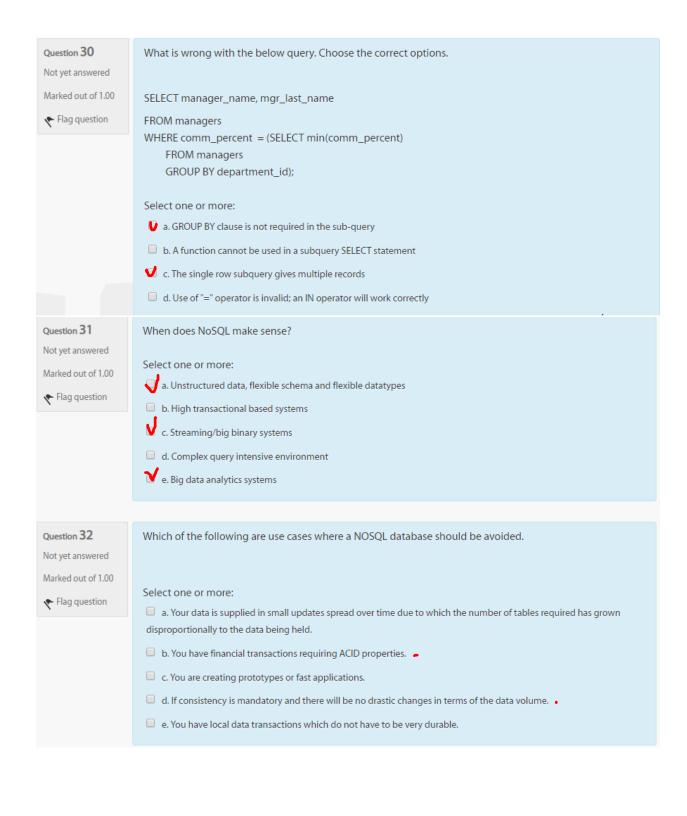
a. They produce the same result

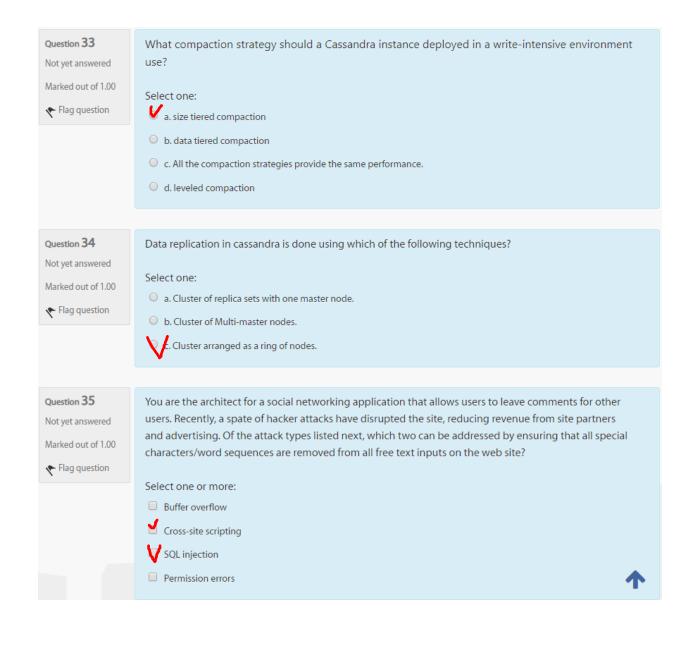
b. ABL result is slightly different - customers that don't have any orders are not displayed



c. ABL is record oriented while SQL is set oriented







Not yet answered

Marked out of 1.00



You have a new product that you're working on for a banking institution. As this service works intimately with the account interest processing components, it will be deployed in an isolated VPC as part of the customer's on-premise private cloud. Knowing only this, you indicate that the product will be packed in the following way: (Select the BEST option):

Select one:

A docker container with the Java application and an init script that downloads dependencies from S3 and runs the service

- A set of VMWare templates for vSphere, along with deployment instructions
- A tarball/zip with a docker container, init script and a readme that includes a list of required pre-regs
- An AWS CloudFormation script that orchestrates the entire deployment
- A Hyper-V VM image, readme, and list of required pre-reqs

Question 37

Not yet answered

Marked out of 1.00



A microservice architecture is good for:

Select one or more:

- Unified releases Easy to ship multiple components with shared dependencies
- √ Technology diversity using the right tools for the right job/service

▶ Agility - Faster time from code change to release

Strong componentization - Well defined boundaries between teams

Latency Performance - Calls to other components are as fast as possible

Not yet answered

Marked out of 1.00



Difference between cluster computing and cloud computing?

Select one:

- On cloud, computers work together but in cluster, computers work independently.
- In cloud, resources are treated independently but in cluster, the resources are treated as one system.
- In cloud, resources are virtualized but in cluster, resources are running physically on a computer system.
- In cloud, resources are not as reliable as in cluster because cluster has redundant nodes for high availability.

Question 39

Not yet answered

Marked out of 1.00



Which of the following is true for MVC architecture?

Select one:

- View should contain the logic related to user Interface and client side validations, controller should contain the logic required to return right view and all the business logic should be contained in the Model
- View should contain the logic related to user Interface, controller should contain the flow control and business logic of the application while model should contain database access logic
- View should contain the logic related to user Interface, controller should contain the logic required to return right view and all the application business logic, validation logic, and database access logic should be contained in the Model



View should contain the logic related to user Interface and client side validations, controller should contain the logic required to return right view and all the application business logic, validation logic, and database access logic should be contained in the Model

Ouestion 40

Not yet answered

Marked out of 1.00

Flag question

You recently defined a new data system that stores a small computation done for every file in a repository. The actual computation is miniscule, with a complexity O(log(n)) where n is the size of the file in lines of code. One of the requirements you listed in your specification was for the computation for an entire repository of 10,000 files, each file being less than 5,000 lines should be computed and saved in your database in less than 5 minutes. The dev team has come back saying that these performance requirements are unrealistic and that even the database insertions into the relational database is taking longer than the 5 minutes specified. Knowing that 10,000 inserts into a properly scaled RDS (Ex: AWS Aurora on an 8XL machine) should take nowhere near 5minutes, you start to question the developer's implementation.

What would be your first question/concern that you would want details on from your developer?

Select one:

- How is traffic routed from the application to the RDS?
- What is the DB schema you are using for this data type you're inserting?

Are you inserting each item individually, or batching the insert request?

- What ORM are you using in your java implementation?
- Are you using a UTF8 encoding, or a UTF16 encoding for strings?

Not yet answered

Marked out of 1.00

Flag question

What of the following considered characteristics of a truly scalable application?

Select one or more:

- A scalable service is capable of handling heterogeneity
- ▼ Increasing resources results in a proportional increase in performance
- Can be used by several users
- 🔰 A scalable service should become more cost effective when it grows
- A scalable service can be consumed by several clients.

Question 42

Not yet answered

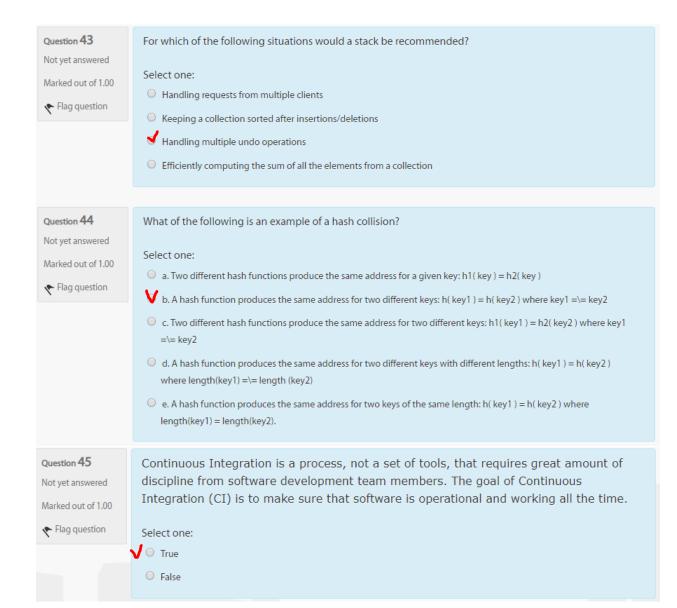
Marked out of 1.00

Flag question

You're working on a new business critical service that for a set of customer repositories, as part of a CI/CD process, evaluates every check-in against 3 quality checks before ultimately deciding if the check-in is GOOD or BAD. Each of these quality checks have already been implemented as a webapp/service. Each time a new check-in is built by the CI/CD system, your component orchestrates the quality analysis; this is done by notifying the analysis sub-systems of any new check-in, and waits for them to respond with their individual evaluation. As this is a business critical app, you want to add some monitoring to the production deployment, along with alarms when certain thresholds are met. You have come up with several indicators you can monitor and have had your dev team put estimates for each one. Considering in this release you have one week (5 days) of dev-time allocated for monitoring, which monitoring indicators do you select to implement?

Select one or more:

- (.5d) Infrastructure indicators: CPU/Memory/Disk space
- (1d) Time from when your service is notified of a new check-in and each sub-service is notified
- (1d) Time from when a sub-service replies with its evaluation and the local service's DB/Data structure is updated
- (1d) Check-in evaluations requested per hour
- (1d) Indicators for each subservice: Time to evaluate, time out occurrences, pass/fail rates
- (1d) Total evaluation time from check-in notification through final recommendation
- (1d) The % of new metric: "Complete/Incomplete evaluations", which is the number of evaluations that successfully completed vs evaluations that had one or more sub-service evaluations fail
- (1d) The pass/fail/error evaluation fail rate for each individual repository, to determine if any individual repo is having systemic issues
- (.5d) The Queries Per Second (QPS) rate for the overall service



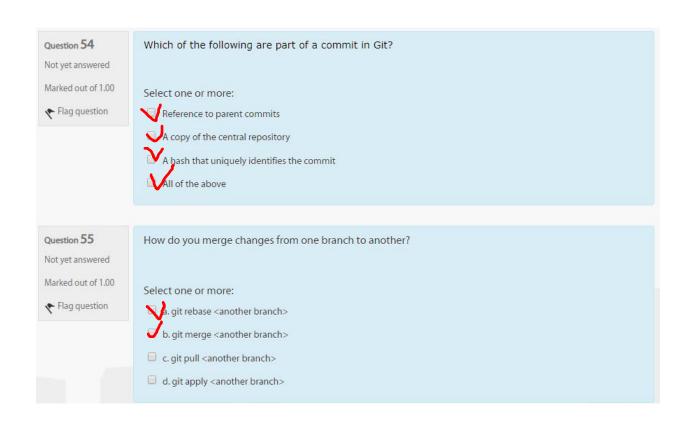
Question 46 Some reasons to apply Continuous Integration: Not yet answered Select one or more: Marked out of 1.00 a. Allow defects to be found early Flag question V b. Allow time to market to be reduce, because the software is tested all the time ac. Software performance and security are improved, because can be checked very often using special CI environments d. To notify developers, stakeholders and end-users about build success or failure Question 47 In IAM, to which of the following can you assign a security policy? Not yet answered Select one or more: Marked out of 1.00 a. User Flag question b. Group d. None of the above Question 48 A new employee has just started working at your company. It is your job to give them administrator access to your AWS console. You have given them a user name, access key ID, secret access key, and you Not yet answered have generated their password. They are now able to log in to your AWS console, but they are not able to Marked out of 1.00 interact with any AWS services. What should you do next? Flag question Select one: a. Require multi-factor authentication for their user account. b. Ensure that they are logging in to your AWS console from your corporate network and not the normal internet. o. Tell them to log out and log back in again. Od. Grant them administrator access by adding them to the administrator group Question 49 What is the maximum size of an S3 object? Not yet answered Select one: Marked out of 1.00 Flag question o b. 50GB

c. 500GBd. 5TB

e. There is no limit

Question 50 About Docker container execution model: Not yet answered a) Is multitask model, but you cannot run multiple threads in a single container Marked out of 1.00 b) The "docker run" command is designed to run a single container Flag question c) You can use a bash-script to start many processes d) To execute many processes in a container, you can use a process supervision tools like "supervisor" Select one or more: a, b, c & d are true b, c & d are true a & b are false a & c are false, b & d are true b, c & d are true, but c and d are not a good usually idea and you should run multiple containers Question 51 It's possible to execute commands inside a running docker container without access the container's console? Not yet answered Marked out of 1.00 Select one: Flag question a. No, there's no way to do that b. Yes, using the command: "docker run -it <command>" c. Yes, using the command: "docker exec <container_name> <command>" d. Yes, using the command: "docker attach <container_name> <command>" Question 52 How to create a new local branch in git? Not yet answered Select one: Marked out of 1.00 a. git new branchName Flag question b. git branch -local branchName o. git branch -n branchName d. git checkout -b branchName Question 53 You have changes in your working directory that you are not ready to commit, and you need to temporarily switch to another branch. Which Git command could you use to store you changes (without Not yet answered committing them) and come back to them later. Marked out of 1.00 Flag question Select one: Va. git stash / git stash apply b. git cherry-pick c. git reset HEAD --hard

od. There is no such command. You must manually save your changes somewhere on the filesystem.



Question 56 Not yet answered Marked out of 1.00 Flag question	It's true about Jira: Select one or more: Any type of JIRA issues can be moved across projects Links allows you to establish relationships/dependencies between issues JIRA UserVoice allows users vote for resolution of an issue favorably or unfavorably. To modify multiple issues, you can use "Bulk Change" option
Question 57 Not yet answered Marked out of 1.00 Flag question	Which of the following Agile approach is based on Given-When-Then pattern to define Test cases in software development? Select one: Test Driven Development Acceptance Test Driven Development Behavior Driven Development None of these
Question 58 Not yet answered Marked out of 1.00 Flag question	Scrum teams usually have these types of backlogs: Select one or more: Release backlog Project backlog Team backlog Sprint backlog
Question 59 Not yet answered Marked out of 1.00 Flag question	The amount of time spent on an issue are represented by these colors: Select one or more: Green for the amount of time originally estimated to resolve the issue Orange for the amount of time left to resolve the issue Red for the amount of time already logged so far while resolving the issue Gray for the amount of time elapsed since the issue registration

Not complete

Marked out of 19.00



Bob is traveling via taxi and has an unlimited supply of banknotes of different denominations. Taxi rent will be in whole numbers and accepts only cash.

Bob need to calculate in how many different ways he can pay for the taxi using different denominations.

Input Format:

The internal test cases read the following input from stdin and pass it to the function:

The first line contains the number of different denominations n Bob has.

The second line contains the value of each denomination separated by a space.

The third line contains the rent amount r which needs to be paid.

Output Format:

Return a single integer representing the number of ways the rent can be paid or 0.

Sample Input (0):

3 1 2

1 2 5

6

Sample Output (0):

5

Explanation (0):

First line in input shows 3 as number of denominations. And given banknotes of \$1, \$2, \$5 in second line, Bob can pay to the taxi driver in following different ways

```
1+1+1+1+1+1=5 bank notes of $1

1+1+1+1+2 = 4 banknotes of $1 and 1 banknote of $2

1+1+2+2 = 2 banknotes of $1 and $2 each

2+2+2 = 3 bank notes of $2

5+1 = 1 bank note of $1 and $5
```

That's why the program will output 5.

Sample Input (1):

```
3
1 5 10
11
```

Sample Output (1):

4

Explanation (1):

First line 3 means Bob has 3 denominations as mentioned in the second line ie \$1, \$5, \$10 Bob need to pay \$11 rent as mentioned in line 3. Bob can pay to the taxi driver in the following ways.

11 banknotes of \$1 each
6 banknotes of \$1 and 1 banknote of \$5
1 banknote of \$1 and 2 banknotes of \$5
1 banknote of \$1 and 1 banknote of \$10
That's why the program will output 4.



roi example:

Test	Input	Result
Example1	3 1 2 5 6	5

```
Answer: (penalty regime: 0 %)
     import java.io.*;
      import java.util.*;
   3
   4 public class CoinChange {
   5
   6 v
   7
           * Complete the function below.
   8
           * DONOT MODIFY anything outside this function!
   9
  10 v
          static long numberOfWaysToPay(int[] denominations,int denominationCor
              return -1;
  11
  12
  13
  14 ▼
           * DO NOT MODIFY THIS METHOD!
  15
  16
  17 v
          public static void main(String[] args) throws IOException {
  18
              Scanner in = new Scanner(System.in);
  19
  20
              int denominationCount = 0;
               denominationCount = Integer.parseInt(in.nextLine().trim());
  21
  22
               int[] denominations = new int[denominationCount];
  23
               String[] bankNotes = in.nextLine().split(" ");
  24
               int element;
  25 ₹
               for (int i = 0; i < denominationCount; i++) {</pre>
                   denominations[i] = Integer.parseInt(bankNotes[i]);
  26
  27
  28
              int rent = in.nextInt();
  29
              long result = numberOfWaysToPay(denominations,denominationCount,)
  30
              System.out.println(result);
  31
  32
  33
  34
```