

1z0-809.96q

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Passing Score: 800
Time Limit: 120 min

1z0-809



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Java SE 8 Programmer II

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Exam A

QUESTION 1

Given:

```
class Sum extends RecursiveAction { //line n1
    static final int THRESHOLD_SIZE = 3;
    int stIndex, lstIndex;
    int [ ] data;
    public Sum (int [ ]data, int start, int end) {
        this.data = data;
        this.stIndex = start;
        this.lstIndex = end;
    }
    protected void compute ( ) {
        int sum = 0;
        if (lstIndex - stIndex <= THRESHOLD_SIZE) {
            for (int i = stIndex; i < lstIndex; i++) {
                sum += data [i];
            }
            System.out.println(sum);
        } else {
            new Sum (data, stIndex + THRESHOLD_SIZE, lstIndex).fork( );

            new Sum (data, stIndex,
                Math.min (lstIndex, stIndex + THRESHOLD_SIZE)
                ).compute ( );
        }
    }
}
```

and the code fragment:

```
ForkJoinPool fjPool = new ForkJoinPool ( );
int data [ ] = {1, 2, 3, 4, 5, 6, 7, 8, 9, 10}
fjPool.invoke (new Sum (data, 0, data.length));
```

and given that the sum of all integers from 1 to 10 is 55.

Which statement is true?



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- A. The program prints several values that total 55.
- B. The program prints 55.
- C. A compilation error occurs at line `n1`.
- D. The program prints several values whose sum exceeds 55.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 2

Given the content of `Operator.java`, `EngineOperator.java`, and `Engine.java` files:

```

Operator.java:
public abstract class Operator {
    protected void turnON();
    protected void turnOFF();
}

EngineOperator.java:
public class EngineOperator extends Operator{
    public final void turnON() { System.out.print("ON "); }
    public final void turnOFF() { System.out.println("OFF"); }
}

Engine.java:
public class Engine{
    Operator m = new EngineOperator();
    public void operate() {
        m.turnON();
        m.turnOFF();
    }
}

```

and the code fragment:

```

Engine carEngine = new Engine();
carEngine.operate();

```

What is the result?

- A. The Engine.java file fails to compile.
- B. The EngineOperator.java file fails to compile.
- C. The Operator.java file fails to compile.
- D. ON OFF

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 3

Given the code fragment:

```
Stream<List<String>> iStr= Stream.of (  
    Arrays.asList ("1", "John"),  
    Arrays.asList ("2", null)0;  
Stream<<String> nInSt = iStr.flatMapToInt ((x) -> x.stream ());  
nInSt.forEach (System.out :: print);
```

What is the result?

- A. 1John2null
- B. 12
- C. A `NullPointerException` is thrown at run time.
- D. A compilation error occurs.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 4

Given the code fragment:

```
Path file = Paths.get ("courses.txt");  
// line n1
```

Assume the `courses.txt` is accessible.

Which code fragment can be inserted at line `n1` to enable the code to print the content of the `courses.txt` file?

- A. `List<String> fc = Files.list(file);
fc.stream().forEach (s - > System.out.println(s));`
- B. `Stream<String> fc = Files.readAllLines (file);
fc.forEach (s - > System.out.println(s));`

- C. `List<String> fc = readAllLines(file);`
`fc.stream().forEach (s -> System.out.println(s));`
- D. `Stream<String> fc = Files.lines (file);`
`fc.forEach (s -> System.out.println(s));`

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 5

Given the code fragment:

```
public void recDelete (String dirName) throws IOException {
    File [ ] listOfFiles = new File (dirName) .listFiles();
    if (listOfFiles != null && listOfFiles.length >0) {
        for (File aFile : listOfFiles) {
            if (aFile.isDirectory ()) {
                recDelete (aFile.getAbsolutePath ());
            } else {
                if (aFile.getName ().endsWith (".class"))
                    aFile.delete ();
            }
        }
    }
}
```

Assume that `Projects` contains subdirectories that contain `.class` files and is passed as an argument to the `recDelete ()` method when it is invoked. What is the result?

- A. The method deletes all the `.class` files in the `Projects` directory and its subdirectories.
- B. The method deletes the `.class` files of the `Projects` directory only.
- C. The method executes and does not make any changes to the `Projects` directory.
- D. The method throws an `IOException`.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 6

Given the definition of the Country class:

```
public class country {  
    public enum Continent {ASIA, EUROPE}  
    String name;  
    Continent region;  
  
    public Country (String na, Continent reg)    {  
        name = na, region = reg;  
    }  
    public String getName () {return name;}  
    public Continent getRegion () {return region;}  
}
```

and the code fragment:

```
List<Country> couList = Arrays.asList (  
    new Country ("Japan", Country.Continent.ASIA),  
    new Country ("Italy", Country.Continent.EUROPE),  
    new Country ("Germany", Country.Continent.EUROPE));  
Map<Country.Continent, List<String>> regionNames = couList.stream ()  
    .collect(Collectors.groupingBy (Country ::getRegion,  
        Collectors.mapping(Country::getName, Collectors.toList())));  
System.out.println(regionNames);
```

- A. {EUROPE = [Italy, Germany], ASIA = [Japan]}
- B. {ASIA = [Japan], EUROPE = [Italy, Germany]}
- C. {EUROPE = [Germany, Italy], ASIA = [Japan]}
- D. {EUROPE = [Germany], EUROPE = [Italy], ASIA = [Japan]}

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 7

Given the code fragment:

```
Map<Integer, String> books = new TreeMap<>();
books.put (1007, "A");
books.put (1002, "C");
books.put (1001, "B");
books.put (1003, "B");
System.out.println (books);
```

What is the result?

- A. {1007 = A, 1002 = C, 1001 = B, 1003 = B}
- B. {1001 = B, 1002 = C, 1003 = B, 1007 = A}
- C. {1002 = C, 1003 = B, 1007 = A}
- D. {1007 = A, 1001 = B, 1003 = B, 1002 = C}

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

Reference: TreeMap inherits SortedMap and automatically sorts the element's key

QUESTION 8

Given:

```
class Book {
    int id;
    String name;
    public Book (int id, String name) {
        this.id = id;
        this.name = name;
    }
    public boolean equals (Object obj) {           //line n1
        boolean output = false;
        Book b = (Book) obj;
        if (this.name.equals(b.name)) {
            output = true;
        }
        return output;
    }
}
```


and the code fragment:

```
Book b1 = new Book (101, "Java Programing");
Book b2 = new Book (102, "Java Programing");
System.out.println (b1.equals(b2));           //line n2
```

Which statement is true?

- A. The program prints true.
- B. The program prints false.
- C. A compilation error occurs. To ensure successful compilation, replace line n1 with:
 boolean equals (Book obj) {
- D. A compilation error occurs. To ensure successful compilation, replace line n2 with:
 System.out.println (b1.equals((Object) b2));

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 9

Given the content of /resources/Message.properties:

```
welcome1="Good day!"
```

and given the code fragment:

```
Properties prop = new Properties ();
FileInputStream fis = new FileInputStream ("/resources/Message.properties");
prop.load(fis);
System.out.println(prop.getProperty("welcome1"));
System.out.println(prop.getProperty("welcome2", "Test")); //line n1
System.out.println(prop.getProperty("welcome3"));
```

What is the result?

- A. Good day!
 Test
 followed by an Exception stack trace

- B. Good day!
 followed by an Exception stack trace
- C. Good day!
 Test
 null
- D. A compilation error occurs at line n1.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 10

Which action can be used to load a database driver by using JDBC3.0?

- A. Add the driver class to the META-INF/services folder of the JAR file.
- B. Include the JDBC driver class in a jdbc.properties file.
- C. Use the `java.lang.Class.forName` method to load the driver class.
- D. Use the `DriverManager.getDriver` method to load the driver class.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 11

Given the code fragment:

```
Path p1 = Paths.get("/Pics/MyPic.jpeg");
System.out.println (p1.getNameCount() +
    ":" + p1.getName(1) +
    ":" + p1.getFileName());
```

Assume that the `Pics` directory does NOT exist.
What is the result?

- A. An exception is thrown at run time.
- B. 2:MyPic.jpeg: MyPic.jpeg
- C. 1:Pics:/Pics/ MyPic.jpeg
- D. 2:Pics: MyPic.jpeg

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 12

Given the code fragments:

```
class MyThread implements Runnable {  
    private static AtomicInteger count = new AtomicInteger (0);  
    public void run ()    {  
        int x = count.incrementAndGet();  
        System.out.print (x+" ");  
    }  
}
```

and

```
Thread thread1 = new Thread(new MyThread());  
Thread thread2 = new Thread(new MyThread());  
Thread thread3 = new Thread(new MyThread());
```

```
Thread [] ta = {thread1, thread2, thread3};  
for (int x= 0; x < 3; x++)    {  
    ta[x].start();  
}
```

Which statement is true?

- A. The program prints 1 2 3 and the order is unpredictable.
- B. The program prints 1 2 3.
- C. The program prints 1 1 1.
- D. A compilation error occurs.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 13

Given:

```
public enum USCurrency    {
    PENNY (1),
    NICKLE(5),
    DIME (10),
    QUARTER(25);

    private int value;

    public USCurrency(int value)    {
        this.value = value;
    }
    public int getValue()    {return value;}
}
public class Coin {
    public static void main (String[] args)    {
        USCurrency usCoin =new USCurrency.DIME;
        System.out.println(usCoin.getValue());
    }
}
```

Which two modifications enable the given code to compile? (Choose two.)

- A. Nest the USCurrency enumeration declaration within the Coin class.
- B. Make the USCurrency enumeration constructor private.
- C. Remove the new keyword from the instantiation of usCoin.
- D. Make the getter method of value as a static method.
- E. Add the final keyword in the declaration of value.

Correct Answer: BC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 14

Given:

```
class ImageScanner implements AutoCloseable {
    public void close () throws Exception {
        System.out.print ("Scanner closed.");
    }
    public void scanImage () throws Exception {
        System.out.print ("Scan.");
        throw new Exception("Unable to scan.");
    }
}
class ImagePrinter implements AutoCloseable {
    public void close () throws Exception {
        System.out.print ("Printer closed.");
    }
    public void printImage () {System.out.print("Print.");    }
}
```

and this code fragment:

```
try (ImageScanner ir = new ImageScanner();
    ImagePrinter iw = new ImagePrinter()) {
    ir.scanImage();
    iw.printImage();
} catch (Exception e) {
    System.out.print(e.getMessage());
}
```

What is the result?

- A. Scan.Printer closed. Scanner closed. Unable to scan.
- B. Scan.Scanner closed. Unable to scan.
- C. Scan. Unable to scan.
- D. Scan. Unable to scan. Printer closed.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 15

Given the structure of the STUDENT table:

```
Student (id INTEGER, name VARCHAR)
```

Given:

```
public class Test {
    static Connection newConnection =null;
    public static Connection get DBConnection () throws SQLException {
        try (Connection con = DriverManager.getConnection(URL, username, password)) {
            newConnection = con;
        }
        return newConnection;
    }
    public static void main (String [] args) throws SQLException {
        get DBConnection ();
        Statement st = newConnection.createStatement();
        st.executeUpdate("INSERT INTO student VALUES (102, 'Kelvin')");
    }
}
```

Assume that:

- The required database driver is configured in the classpath.
- The appropriate database is accessible with the URL, userName, and passWord exists.
- The SQL query is valid.

What is the result?

- A. The program executes successfully and the STUDENT table is updated with one record.
- B. The program executes successfully and the STUDENT table is NOT updated with any record.
- C. A `SQLException` is thrown as runtime.
- D. A `NullPointerException` is thrown as runtime.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 16

Given the code fragments:

```
class Employee {
    Optional<Address> address;
    Employee (Optional<Address> address) {
        this.address = address;
    }
    public Optional<Address> getAddress() { return address; }
}
```

```
class Address {
    String city = "New York";
    public String getCity { return city; }
    public String toString() {
        return city;
    }
}
```

and

```
Address address = null;
Optional<Address> addrsl = Optional.ofNullable (address);
Employee e1 = new Employee (addrsl);
String eAddress = (addrsl.isPresent()) ? addrsl.get().getCity() : "City Not
available";
```



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What is the result?

- A. New York
- B. City Not available
- C. null

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D. A `NoSuchElementException` is thrown at run time.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 17

Given the code fragment:

```
Stream<Path> files = Files.walk(Paths.get(System.getProperty("user.home")));
    files.forEach (fName -> {                                //line n1
        try {
            Path aPath = fName.toAbsolutePath();             //line n2
            System.out.println(fName + ":"
                + Files.readAttributes(aPath, Basic.File.Attributes.class).creationTime
            );
        } catch (IOException ex) {
            ex.printStackTrace();
        }
    });
```

What is the result?

- A. All files and directories under the home directory are listed along with their attributes.
- B. A compilation error occurs at line n1.
- C. The files in the home directory are listed along with their attributes.
- D. A compilation error occurs at line n2.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 18

Given that `course.txt` is accessible and contains:

Course : : Java

and given the code fragment:

```
public static void main (String[ ] args)    {
    int i;
    char c;
    try (FileInputStream fis = new FileInputStream ("course.txt");
        InputStreamReader isr = new InputStreamReader(fis);) {
        while (isr.ready())    {    //line n1
            isr.skip(2);
            i = isr.read ();
            c = (char) i;
            System.out.print(c);
        }
    } catch (Exception e)    {
        e.printStackTrace();
    }
}
```

What is the result?

- A. ur :: va
- B. ueJa
- C. The program prints nothing.
- D. A compilation error occurs at line n1.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 19

Given:

```
public class Test<T>    {
    private T t;
    public T get ()    {
        return t;
    }
}
```

```

public void set (T t)    {
    this.t = t;
}
public static void main (String args [ ] )    {
    Test<String> type = new Test<>();
    Test type 1 = new Test ();                //line n1
    type.set("Java");
    type1.set(100);                            //line n2
    System.out.print(type.get() + " " + type1.get());
}
}

```

What is the result?

- A. Java 100
- B. java.lang.string@<hashcode>java.lang.Integer@<hashcode>
- C. A compilation error occurs. To rectify it, replace line n1 with:
 Test<Integer> type1 = new Test<>();
- D. A compilation error occurs. To rectify it, replace line n2 with:
 type1.set (Integer(100));

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 20

Given the definition of the Vehicle class:

```

class Vehicle    {
    String name;
    void setName (String name)    {
        this.name = name;
    }
    String getName()    {
        return name;
    }
}

```

Which action encapsulates the Vehicle class?

- A. Make the `Vehicle` class public.
- B. Make the name variable public.
- C. Make the `setName` method public.
- D. Make the name variable private.
- E. Make the `setName` method private.
- F. Make the `getName` method private.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 21

Given:

```
public class product {
    int id; int price;
    public Product (int id, int price) {
        this.id = id;
        this.price = price;
    }
    public String toString() { return id + ":" + price; }
}
```

and the code fragment:

```
List<Product> products = Arrays.asList(new Product(1, 10),
    new Product (2, 30),
    new Product (2, 30));
Product p = products.stream().reduce(new Product (4, 0), (p1, p2) -> {
    p1.price+=p2.price;
    return new Product (p1.id, p1.price);});
products.add(p);
products.stream().parallel()
    .reduce((p1, p2) -> p1.price > p2.price ? p1 : p2)
    .ifPresent(System.out::println);
```

What is the result?

- A. 2 : 30
- B. 4 : 0
- C. 4 : 60
- D. 4 : 60
2 : 30
3 : 20
1 : 10
- E. The program prints nothing.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 22

Given the code fragments:

```
public class Book implements Comparator<Book> {
    String name;
    double price;
    public Book () {}
    public Book(String name, double price) {
        this.name = name;
        this.price = price;
    }
    public int compare(Book b1, Book b2) {
        return b1.name.compareTo(b2.name);
    }
    public String toString() {
        return name + ":" + price;
    }
}
```

and

```
List<Book>books = Arrays.asList (new Book ("Beginning with Java", 2), new book ("A
Guide to Java Tour", 3));
Collections.sort(books, new Book());
System.out.print(books);
```

What is the result?

- A. [A Guide to Java Tour:3.0, Beginning with Java:2.0]
- B. [Beginning with Java:2, A Guide to Java Tour:3]
- C. A compilation error occurs because the Book class does not override the abstract method `compareTo()`.
- D. An `Exception` is thrown at run time.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 23

Given the code fragment:

```
List<String> listVal = Arrays.asList("Joe", "Paul", "Alice", "Tom");
System.out.println (
    // line n1
);
```

Which code fragment, when inserted at line n1, enables the code to print the count of string elements whose length is greater than three?

- A. `listVal.stream().filter(x -> x.length()>3).count()`
- B. `listVal.stream().map(x -> x.length()>3).count()`
- C. `listVal.stream().peek(x -> x.length()>3).count().get()`
- D. `listVal.stream().filter(x -> x.length()>3).mapToInt(x -> x).count()`

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 24

Given the code fragments:

```

class Caller implements Callable<String>    {
    String str;
    public Caller (String s) {this.str=s;}
    public String call()throws Exception { return str.concat ("Caller");}
}
class Runner implements Runnable    {
String str;
    public Runner (String s) {this.str=s;}
    public void run () { System.out.println (str.concat ("Runner"));}
}

```

and

```

public static void main (String[] args) InterruptedException, ExecutionException    {
    ExecutorService es = Executors.newFixedThreadPool(2);
    Future f1 = es.submit (new Caller ("Call"));
    Future f2 = es.submit (new Runner ("Run"));
    String str1 = (String) f1.get();
    String str2 = (String) f2.get();           //line n1
    System.out.println(str1+ ":" + str2);
}

```

What is the result?

- A. The program prints:
Run Runner
Call Caller : null
And the program does not terminate.
- B. The program terminates after printing:
Run Runner
Call Caller : Run
- C. A compilation error occurs at line n1.
- D. An `Execution` is thrown at run time.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 25

Given:

```
public class Canvas implements Drawable {  
    public void draw ()    { }  
}  
  
public abstract class Board extends Canvas { }  
  
public class Paper extends Canvas {  
    protected void draw (int color)    { }  
}  
public class Frame extends Canvas implements Drawable {  
    public void resize ()    { }  
}  
public interface Drawable {  
    public abstract void draw ();  
}
```

Which statement is true?

- A. Board does not compile.
- B. Paper does not compile.
- C. Frame does not compile.
- D. Drawable does not compile.
- E. All classes compile successfully.

Correct Answer: E

Section: (none)

Explanation

Explanation/Reference:

QUESTION 26

Given the code fragment:

```
List<String> str = Arrays.asList ("my", "pen", "is", "your", "pen");  
Predicate<String> test = s -> {  
    int i = 0;  
    boolean result = s.contains ("pen");  
    System.out.print(i++) + ":";
```

```

        return result;
    };
    str.stream()
        .filter(test)
        .findFirst()
        .ifPresent(System.out ::print);

```

What is the result?

- A. 0 : 0 : pen
- B. 0 : 1 : pen
- C. 0 : 0 : 0 : 0 : 0 : pen
- D. 0 : 1 : 2 : 3 : 4 :
- E. A compilation error occurs.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 27

Given the code fragment:

```

List<String> empDetails = Arrays.asList("100, Robin, HR",
                                         "200, Mary, AdminServices",
                                         "101, Peter, HR");

empDetails.stream()
    .filter(s-> s.contains("1"))
    .sorted()
    .forEach(System.out::println); //line n1

```

What is the result?

- A. 100, Robin, HR
101, Peter, HR
- B. A compilation error occurs at line n1.
- C. 100, Robin, HR
101, Peter, HR
200, Mary, AdminServices

D. 100, Robin, HR
200, Mary, AdminServices
101, Peter, HR

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 28

Which two statements are true about localizing an application? (Choose two.)

- A. Support for new regional languages does not require recompilation of the code.
- B. Textual elements (messages and GUI labels) are hard-coded in the code.
- C. Language and region-specific programs are created using localized data.
- D. Resource bundle files include data and currency information.
- E. Language codes use lowercase letters and region codes use uppercase letters.

Correct Answer: AE

Section: (none)

Explanation

Explanation/Reference:

Reference: <http://docs.oracle.com/javase/7/docs/technotes/guides/intl/>

QUESTION 29

Which statement is true about `java.util.stream.Stream`?

- A. A stream cannot be consumed more than once.
- B. The execution mode of streams can be changed during processing.
- C. Streams are intended to modify the source data.
- D. A parallel stream is always faster than an equivalent sequential stream.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 30

The data.doc, data.txt and data.xml files are accessible and contain text.
Given the code fragment:

```
Stream<Path> paths = Stream.of (Paths. get("data.doc"),
    Paths. get("data.txt"),
    Paths. get("data.xml"));
paths.filter(s-> s.toString().endsWith("txt")).forEach(
    s -> {
        try {
            Files.readAllLines(s)
                .stream()
                .forEach(System.out::println); //line n1
        } catch (IOException e) {
            System.out.println("Exception");
        }
    }
);
```

What is the result?

- A. The program prints the content of data.txt file.
- B. The program prints:
Exception
<<The content of the data.txt file>>
Exception
- C. A compilation error occurs at line n1.
- D. The program prints the content of the three files.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 31

Given:

```
final class Folder {           //line n1
    //line n2
    public void open () {
        System.out.print("Open");
    }
}
public class Test {
    public static void main (String [] args) throws Exception {
        try (Folder f = new Folder()) {
            f.open();
        }
    }
}
```

Which two modifications enable the code to print Open Close? (Choose two.)

- A. Replace line n1 with:
class Folder implements AutoCloseable {
- B. Replace line n1 with:
class Folder extends Closeable {
- C. Replace line n1 with:
class Folder extends Exception {
- D. At line n2, insert:
final void close () {
 System.out.print("Close");
}
- E. At line n2, insert:
public void close () throws IOException {
 System.out.print("Close");
}

Correct Answer: AE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 32

You want to create a singleton class by using the Singleton design pattern.

Which two statements enforce the singleton nature of the design? (Choose two.)

- A. Make the class `static`.
- B. Make the constructor `private`.
- C. Override `equals()` and `hashCode()` methods of the `java.lang.Object` class.
- D. Use a `static` reference to point to the single instance.
- E. Implement the `Serializable` interface.

Correct Answer: BD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 33

Given the code fragment:

```
List<Integer> codes = Arrays.asList (10, 20);
UnaryOperator<Double> uo = s -> s +10.0;
codes.replaceAll(uo);
codes.forEach(c -> System.out.println(c));
```

What is the result?

- A. 20.0
30.0
- B. 10
20
- C. A compilation error occurs.
- D. A `NumberFormatException` is thrown at run time.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 34

Given:

```
public class Customer {
    private String fName;
    private String lName;
    private static int count;
    public Customer (String first, String last) {fName = first, lName = last;
        ++count;}
    static { count = 0; }
    public static int getCount() {return count; }
}

public class App {
    public static void main (String [] args) {
        Customer c1 = new Customer("Larry", "Smith");
        Customer c2 = new Customer("Pedro", "Gonzales");
        Customer c3 = new Customer("Penny", "Jones");
        Customer c4 = new Customer("Lars", "Svenson");
        c4 = null;
        c3 = c2;
        System.out.println (Customer.getCount());
    }
}
```

What is the result?

- A. 0
- B. 2
- C. 3
- D. 4
- E. 5

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 35

Given:

Item table

- ID, INTEGER: PK
- DESCRIP, VARCHAR(100)
- PRICE, REAL
- QUANTITY< INTEGER

And given the code fragment:

```
9. try {
10.     Connection conn = DriverManager.getConnection(dbURL, username, password);
11.     String query = "Select * FROM Item WHERE ID = 110";
12.     Statement stmt = conn.createStatement();
13.     ResultSet rs = stmt.executeQuery(query);
14.     while(rs.next()) {
15.         System.out.println("ID:          " + rs.getInt("Id"));
16.         System.out.println("Description:    " + rs.getString("Descrip"));
17.         System.out.println("Price:         " + rs.getDouble("Price"));
18.         System.out.println("Quantity:     " + rs.getInt("Quantity"));
19.     }
20. } catch (SQLException se) {
21.     System.out.println("Error");
22. }
```

Assume that:

- The required database driver is configured in the classpath.
- The appropriate database is accessible with the dbURL, userName, and passWord exists.
- The SQL query is valid.

What is the result?

- A. An exception is thrown at runtime.
- B. Compilation fails.
- C. The code prints `Error`.
- D. The code prints information about Item 110.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 36

Given:

```
class Worker extends Thread {
    CyclicBarrier cb;
    public Worker(CyclicBarrier cb) { this.cb = cb; }
    public void run () {
        try {
            cb.await();
            System.out.println("Worker...");
        } catch (Exception ex) { }
    }
}
class Master implements Runnable { //line n1
    public void run () {
        System.out.println("Master...");
    }
}
```

and the code fragment:

```
Master master = new Master();
//line n2
Worker worker = new Worker(cb);
worker.start();
```

You have been asked to ensure that the run methods of both the Worker and Master classes are executed. Which modification meets the requirement?

- A. At line n2, insert `CyclicBarrier cb = new CyclicBarrier(2, master);`
- B. Replace line n1 with `class Master extends Thread {`
- C. At line n2, insert `CyclicBarrier cb = new CyclicBarrier(1, master);`
- D. At line n2, insert `CyclicBarrier cb = new CyclicBarrier(master);`

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 37

Given the code fragment:

```
String str = "Java is a programming language";  
ToIntFunction<String> indexVal = str::indexOf; //line n1  
int x = indexVal.applyAsInt("Java");           //line n2  
System.out.println(x);
```

What is the result?

- A. 0
- B. 1
- C. A compilation error occurs at line n1.
- D. A compilation error occurs at line n2.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 38

Given the code fragment:

```
List<String> codes = Arrays.asList ("DOC", "MPEG", "JPEG");  
codes.forEach (c -> System.out.print(c + " "));  
String fmt = codes.stream()  
    .filter (s-> s.contains ("PEG"))  
    .reduce((s, t) -> s + t).get();  
System.out.println("\n" + fmt);
```

What is the result?

- A. DOC MPEG JPEG
MPEGJPEG
- B. DOC MPEG MPEGJPEG
MPEGMPEGJPEG
- C. MPEGJPEG
MPEGJPEG

D. The order of the output is unpredictable.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 39

Given the code fragment:

```
List<String> nL = Arrays.asList("Jim", "John", "Jeff");
Function<String, String> funVal = s -> "Hello : ".contact(s);
nL.Stream()
    .map(funVal)
    .peek(System.out::print);
```

What is the result?

- A. Hello : Jim Hello : John Hello : Jeff
- B. Jim John Jeff
- C. The program prints nothing.
- D. A compilation error occurs.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 40

Given:

```
public interface Moveable<Integer> {
    public default void walk (Integer distance) {System.out.println("Walking");}
    public void run(Integer distance);
}
```

Which statement is true?

- A. Moveable can be used as below:
`Moveable<Integer> animal = n -> System.out.println("Running" + n);
animal.run(100);
animal.walk(20);`
- B. Moveable can be used as below:
`Moveable<Integer> animal = n -> n + 10;
animal.run(100);
animal.walk(20);`
- C. Moveable can be used as below:
`Moveable animal = (Integer n) -> System.out.println(n);
animal.run(100);
Moveable.walk(20);`
- D. Movable cannot be used in a lambda expression.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 41

Which two code blocks correctly initialize a Locale variable? (Choose two.)

- A. `Locale loc1 = "UK";`
- B. `Locale loc2 = Locale.getInstance("ru");`
- C. `Locale loc3 = Locale.getLocaleFactory("RU");`
- D. `Locale loc4 = Locale.UK;`
- E. `Locale loc5 = new Locale ("ru", "RU");`

Correct Answer: DE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 42

Given:

```

class FuelNotAvailException extends Exception {    }
class Vehicle    {
    void ride() throws FuelNotAvailException {    //line n1
        System.out.println("Happy Journey!");
    }
}
class SolarVehicle extends Vehicle    {
    public void ride () throws Exception    {    //line n2
        super ride ();
    }
}

```

and the code fragment:

```

public static void main (String[] args) throws FuelNotAvailException, Exception    {
    Vehicle v = new SolarVehicle ();
    v.ride();
}

```

Which modification enables the code fragment to print Happy Journey!?

- A. Replace line n1 with public void ride() throws FuelNotAvailException {
- B. Replace line n1 with protected void ride() throws Exception {
- C. Replace line n2 with void ride() throws Exception {
- D. Replace line n2 with private void ride() throws FuelNotAvailException {

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 43

Given the definition of the Emp class:

```

public class Emp
    private String eName;
    private Integer eAge;

    Emp(String eN, Integer eA)    {

```

```

        this.eName = eN;
        this.eAge = eA;
    }
    public Integer getEAge () {return eAge;}
    public String getEName () {return eName;}
}

```

and code fragment:

```

List<Emp>li = Arrays.asList(new Emp("Sam", 20), New Emp("John", 60), New Emp("Jim", 51));
Predicate<Emp> agVal = s -> s.getEAge() > 50;           //line n1
li = li.stream().filter(agVal).collect(Collectors.toList());
Stream<String> names = li.stream().map.(Emp::getEName);   //line n2
names.forEach(n -> System.out.print(n + " "));

```

What is the result?

- A. Sam John Jim
- B. John Jim
- C. A compilation error occurs at line n1.
- D. A compilation error occurs at line n2.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 44

For which three objects must a vendor provide implementations in its JDBC driver? (Choose three.)

- A. Time
- B. Date
- C. Statement
- D. ResultSet
- E. Connection
- F. SQLException
- G. DriverManager

Correct Answer: CDE

Section: (none)

Explanation

Explanation/Reference:

Explanation:

Database vendors support JDBC through the JDBC driver interface or through the ODBC connection. Each driver must provide implementations of `java.sql.Connection`, `java.sql.Statement`, `java.sql.PreparedStatement`, `java.sql.CallableStatement`, and `java.sql.ResultSet`. They must also implement the `java.sql.Driver` interface for use by the generic `java.sql.DriverManager` interface.

QUESTION 45

Given the code fragment:

```
LocalDate valentinesDay = LocalDate.of(2015, Month.FEBRUARY, 14);
LocalDate nextYear = valentinesDay.plusYears(1);
nextYear.plusDays(15); //line n1
System.out.println(nextYear);
```

What is the result?

- A. 2016-02-14
- B. A `DateTimeException` is thrown.
- C. 2016-02-29
- D. A compilation error occurs at line `n1`.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 46

Given:

```
interface Doable {
    public void doSomething (String s);
}
```

Which two class definitions compile? (Choose two.)

- A.

```
public abstract class Task implements Doable {
    public void doSomethingElse(String s)    { }
}
```
- B.

```
public abstract class Work implements Doable {
    public abstract void doSomething(String s)    { }
    public void doYourThing(Boolean b)    { }
```
- C.

```
public class Job implements Doable {
    public void doSomething(Integer i)    { }
```
- D.

```
public class Action implements Doable {
    public void doSomething(Integer i)    { }
    public String doThis(Integer j)    { }
```
- E.

```
public class Do implements Doable {
    public void doSomething(Integer i)    { }
    public void doSomething(String s)    { }
    public void doThat (String s)    { }
```

Correct Answer: AE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 47

Given the code fragment:

```
List<Integer> list1 = Arrays.asList(10, 20);
List<Integer> list2 = Arrays.asList(15, 30);
//line n1
```

Which code fragment, when inserted at line n1, prints 10 20 15 30?

- A.

```
Stream.of(list1, list2)
    .flatMap(list -> list.stream())
    .forEach(s -> System.out.print(s + " "));
```
- B.

```
Stream.of(list1, list2)
```

```

        .flatMap(list -> list.intStream())
        .forEach(s -> System.out.print(s + " "));
C. list1.stream()
    .flatMap(list2.stream().flatMap(el -> el.stream()))
    .forEach(s -> System.out.println(s + " "));
D. Stream.of(list1, list2)
    .flatMapToInt(list -> list.stream())
    .forEach(s -> System.out.print(s + " "));

```

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 48

Given:

```

Book.java:
public class Book {
    private String read(String bname) { return "Read" + bname }
}
EBook.java:
public class EBook extends Book {
    public String read (String url) { return "View" + url }
}

Test.java:
public class Test {
    public static void main (String[] args) {
        Book b1 = new Book();
        b1.read("Java Programing");
        Book b2 = new EBook();
        b2.read("http://ebook.com/ebook");
    }
}

```

What is the result?

A. Read Java Programming
View http:// ebook.com/ebook

- B. Read Java Programming
Read `http://ebook.com/ebook`
- C. The `EBook.java` file fails to compile.
- D. The `Test.java` file fails to compile.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 49

Given the code fragment:

```
ZonedDateTime depart = ZonedDateTime.of(2015, 1, 15, 3, 0, 0, 0, ZoneID.of("UTC-7"));
ZonedDateTime arrive = ZonedDateTime.of(2015, 1, 15, 9, 0, 0, 0, ZoneID.of("UTC-5"));
long hrs = ChronoUnit.HOURS.between(depart, arrive); //line n1
System.out.println("Travel time is" + hrs + "hours");
```

What is the result?

- A. Travel time is 4 hours
- B. Travel time is 6 hours
- C. Travel time is 8 hours
- D. An exception is thrown at line n1.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 50

Given the code fragment:

```
Path path1 = Paths.get("/app/./sys/");
Path res1 = path1.resolve("log");
Path path2 = Paths.get("/server/exe/");
```



```
Path res1 = path1.resolve("/readme/");
System.out.println(res1);
System.out.println(res2);
```

What is the result?

- A. /app/sys/log
/readme/server/exe
- B. /app/log/sys
/server/exe/readme
- C. /app/./sys/log
/readme
- D. /app/./sys/log
/server/exe/readme

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 51

Given the code fragment:

```
List<String> colors = Arrays.asList("red", "green", "yellow");
Predicate<String> test = n -> {
    System.out.println("Searching...");
    return n.contains("red");
};
colors.stream()
    .filter(c -> c.length() > 3)
    .allMatch(test);
```

What is the result?

- A. Searching...
- B. Searching...
Searching...
- C. Searching...
Searching...

Searching...

D. A compilation error occurs.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 52

Given:

```
class UserException extends Exception { }  
class AgeOutOfLimitException extends UserException { }
```

and the code fragment:

```
class App {  
    public void doRegister(String name, int age)  
        throws UserException, AgeOutOfLimitException {  
        if (name.length () < 6) {  
            throw new UserException ();  
        } else if (age >= 60) {  
            throw new AgeOutOfLimitException ();  
        } else {  
            System.out.println("User is registered.");  
        }  
    }  
    public static void main(String[ ] args) throws UserException {  
  
        App t = new App ();  
        t.doRegister("Mathew", 60);  
    }  
}
```

What is the result?

- A. User is registered.
- B. An AgeOutOfLimitException is thrown.
- C. A UserException is thrown.

D. A compilation error occurs in the `main` method.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 53

Given the code fragment:

```
Path path1 = Paths.get("/software/../../sys/readme.txt");  
Path path2 = path1.normalize();  
Path path3 = path2.relative(path1);  
System.out.print(path1.getNameCount());  
System.out.print(" : " + path2.getNameCount());  
System.out.print(" : " + path3.getNameCount());
```

What is the result?



<https://www.gratisexam.com/>

A. 5 : 3 : 6

B. 6 : 5 : 6

C. 3 : 3 : 4

D. 4 : 4 : 4

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 54

Given:

```
class Product {
    String name;
    int qty;
    public String toString(){
        return name;
    }
    public Product(String name, int qty) {
        this.name = name;
        this.qty = qty;
    }
    static class ProductFilter {
        public boolean isAvailable(Product p) {    // line n1
            return p.qty >= 10;
        }
    }
}
```

and the code fragment:

```
List<Product> products = Arrays.asList(
    new Product("MotherBoard", 5),
    new Product("Speaker", 20));
products.stream()
    .filter(Product.ProductFilter::isAvailable) // line n2
    .forEach(p -> System.out.println(p));
```

Which modification enables the code fragment to print Speaker?

- A. Implement Predicate in the Product.ProductFilter class and replace line n2 with `.filter (p -> p.ProductFilter.test (p))`
- B. Replace line n1 with:
`public static boolean isAvailable (Product p) {`
- C. Replace line n2 with:
`.filter (p -> p.ProductFilter: :isAvailable (p))`
- D. Replace line n2 with:
`.filter (p -> Product: :ProductFilter: :isAvailable ())`

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 55

Given the content:

MessagesBundle.properties file:

```
username = Enter User Name  
password = Enter Password
```

MessagesBundle_fr_FR.properties file:

```
username = Entrez le nom d'utilisateur  
password = Entrez le mot de passe
```

and the code fragment:

```
Locale currentLocale = new Locale.Builder().setRegion("FR").setLanguage("fr").build();  
ResourceBundle messages = ResourceBundle.getBundle("MessagesBundle", currentLocale);  
Enumeration<String> names = messages.getKeys();  
while (names.hasMoreElements()) {  
    String key = names.nextElement();  
    String name = messages.getString(key);  
    System.out.println(key + " = " + name);  
}
```

What is the result?

- A. username = Entrez le nom d'utilisateur
password = Entrez le mot de passe
- B. username = Enter User Name
password = Enter Password
- C. A compilation error occurs.
- D. The program prints nothing.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 56

Given:

```

public class StrMan {
    public static void doStuff(String s) {
        try {
            if (s == null) {
                throw new NullPointerException();
            }
        } finally {
            System.out.println("-finally-");
        }
        System.out.println("-doStuff-");
    }
    public static void main (String[] args) {
        try {
            doStuff(null);
        } catch (NullPointerException npe) {
            System.out.println("-catch-");
        }
    }
}

```

What is the result?

- A. -catch-
-finally-
-dostuff-
- B. -catch-
- C. -finally-
-catch-
- D. -finally
-dostuff-
-catch-

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Explanation:

Your Code ...

```
1 public class StrMan {
2     public static void doStuff(String s) {
3         try {
4             if (s == null) {
5                 throw new NullPointerException();
6             }
7         } finally {
8             System.out.println("-finally-");
9         }
10        System.out.println("-doStuff-");
11    }
12    public static void main (String[] args) {
13        try {
14            doStuff(null);
15        } catch (NullPointerException npe) {
16            System.out.println("-catch-");
17        }
18    }
19 }
```

CommandLine Arguments ...

Stdin Inputs...

⊙ Exe

Result...

CPU Time: 0.22 sec(s), Memory: 30280 kilobyte(s)

```
-finally-
-catch-
```

QUESTION 57

Given:

```
public class Foo {
    public void methodB(String s) { System.out.println("Foo " + s ); }
}

public class Bar extends Foo {
    public void methodB(String s) { System.out.println("Bar " + s); }
}

public class Baz extends Bar {
    public void methodB(String s) { System.out.println("Baz " + s); }
}

public class Daze extends Baz{
    private Bar bb = new Bar();
    public void methodB(String s) {
        bb.methodB(s);
        super.methodB(s);
    }
}

public class TestClass {
    public static void main(String[] args) {
        Baz d = new Daze();
        d.methodB("Hello");
    }
}
```

What is the result?

- A. Bar Hello
Foo Hello
- B. Bar Hello
Baz Hello

- C. Baz Hello
- D. A compilation error occurs in the Daze class.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 58

Given the content of the employee.txt file:

Every worker is a master.

Given that the employee.txt file is accessible and the file allemp.txt does NOT exist, and the code fragment:

```
try {
    List<String> content = Files.readAllLines(Paths.get("employee.txt"));
    content.stream().forEach(line -> {
        try {
            Files.write(
                Paths.get("allemp.txt"),
                line.getBytes(),
                StandardOpenOption.APPEND
            );
        } catch (IOException e) { System.out.println("Exception 1"); }
    });
} catch (IOException e) { System.out.println("Exception 2"); }
```

What is the result?

- A. Exception 1
- B. Exception 2
- C. The program executes, does NOT affect the system, and produces NO output.
- D. allemp.txt is created and the content of employee.txt is copied to it.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 59

Given:

```
public class Job {  
    String name;  
    Integer cost;  
    Job(String name, Integer cost) {  
        this.name = name;  
        this.cost = cost;  
    }  
    String getName() { return name; }  
    int getCost() { return cost; }  
    public static void main(String[] args) {  
        Job j1 = new Job("IT", null);  
        DoubleSupplier js1 = j1::getCost;  
        System.out.println(j1.getName() + ":" + js1.getAsDouble());  
    }  
}
```

What is the result?

- A. IT:null
- B. A NullPointerException is thrown at run time.
- C. A compilation error occurs.
- D. IT:0.0

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 60

Given the code fragment:

```
List<String> li = Arrays.asList("Java", "J2EE", "J2ME", "JSTL", "JSP", "Oracle DB");
Predicate<String> val = p -> p.contains("J");
List<String> neLi = li.stream().filter(x -> x.length() > 3)
    .filter(val).collect(Collectors.toList());
System.out.println(neLi);
```

What is the result?

- A. A compilation error occurs.
- B. [Java, J2EE, J2ME, JSTL, JSP]
- C. null
- D. [Java, J2EE, J2ME, JSTL]

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 61

Given:

```
class Product {
    String pname;
    public Product(String pname) {
        this.pname = pname;
    }
}
```

and the code fragment:

```
Product p1 = new Product("PowerCharger");
Product p2 = p1;
System.out.println(p1.equals(p2));
Product p3 = new Product("PowerCharger");
System.out.println(p1.equals(p3));
```

What is the result?

- A. true
true
- B. false
true
- C. false
false
- D. true
false

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 62

Given:

```
class DataConverter {
    public void copyFlatFilesToTables() { }
    public void close() throws Exception {
        throw new RuntimeException(); // line n1
    }
}
```

and the code fragment:

```

public static void main(String[] args) throws Exception {
    try (DataConverter dc = new DataConverter()) // line n2
    { dc.copyFlatFilesToTables(); }
}

```

What is the result?

- A. A compilation error occurs at line n2.
- B. A compilation error occurs because the try block doesn't have a catch or finally block.
- C. A compilation error occurs at line n1.
- D. The program compiles successfully.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 63

Given the code fragment:

```

10. try {
11.     Connection conn = DriverManager.getConnection(dbURL, userName, passWord);
12.     String query = "SELECT * FROM Employee WHERE ID = 110";
13.     Statement stmt = conn.createStatement();
14.     ResultSet rs = stmt.executeQuery(query);
15.     System.out.println("Employee ID: " + rs.getInt("ID"));
16. } catch (Exception se) {
17.     System.out.println("Error");
18. }

```

Assume that:

The required database driver is configured in the classpath.

The appropriate database is accessible with the dbURL, userName, and passWord exists

The Employee table has a column ID of type integer and the SQL query matches one record.

What is the result?

- A. Compilation fails at line 14.
- B. Compilation fails at line 15.
- C. The code prints the employee ID.
- D. The code prints `Error`.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 64

Given the code fragment:

```
public static void main(String[] args) {  
    Console console = System.console();  
    char[] pass = console.readPassword("Enter password:"); // line n1  
    String password = new String(pass); // line n2  
}
```

What is the result?

- A. A compilation error occurs at line n1.
- B. A compilation error occurs at line n2.
- C. The code reads the password without echoing characters on the console.
- D. A compilation error occurs because the `IOException` isn't declared to be thrown or caught?

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 65

Locale	Currency Symbol	Currency Code
US	\$	USD

and the code fragment?

```
double d = 15;
Locale l = new Locale("en", "US");
NumberFormat formatter = NumberFormat.getCurrencyInstance(l);
System.out.println(formatter.format(d));
```

What is the result?

- A. \$15.00
- B. 15 \$
- C. USD 15.00
- D. USD \$15

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 66

Given the code fragment:

```
Stream<List<String>> strs = Stream.of(
    Arrays.asList("text1", "text2"),
    Arrays.asList("text2", "text3"));
Stream<String> bs2 = strs
    .filter(b -> b.contains("text1"))
    .flatMap(rs -> rs.stream());
bs2.forEach(b -> System.out.print(b));
```

What is the result?

- A. text1text2
- B. text1text2text2text3
- C. text1
- D. [text1, text2]

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 67

Given:

```
public interface LengthValidator {  
    public boolean checkLength(String str);  
}
```

and

```
public class Txt {  
    public static void main(String[] args) {  
        boolean res = new LengthValidator() {  
            public boolean checkLength(String str) {  
                return str.length() > 5 && str.length() < 10;  
            }  
        }.checkLength("Hello");  
    }  
}
```

Which interface from the `java.util.function` package should you use to refactor the class `Txt`?

- A. Consumer
- B. Predicate

- C. Supplier
- D. Function

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Reference: <https://docs.oracle.com/javase/8/docs/api/java/util/function/package-summary.html>

QUESTION 68

Given:

```
public class Product {  
    public double applyDiscount(double price) {  
        assert (price > 0); // line n1  
        return price * 0.50;  
    }  
    public static void main(String[] args) {  
        Product p = new Product();  
        double newPrice =  
            p.applyDiscount(Double.parseDouble(args[0]));  
        System.out.println("New Price: " + newPrice);  
    }  
}
```

and the command:

```
java Product 0
```

What is the result?

- A. An `AssertionError` is thrown.
- B. A compilation error occurs at line n1.
- C. New Price: 0.0
- D. A `NumberFormatException` is thrown at run time.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 69

Given the code fragment:

```
LocalTime now = LocalTime.now();  
long timeToBreakfast = 0;  
LocalTime office_start = LocalTime.of(7, 30);  
if (office_start.isAfter(now)) {  
    timeToBreakfast = now.until(office_start, MINUTES);  
} else {  
    timeToBreakfast = now.until(office_start, HOURS);  
}  
System.out.println(timeToBreakfast);
```

Assume that the value of now is 6:30 in the morning.

What is the result?

- A. An exception is thrown at run time.
- B. 0
- C. 60
- D. 1

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 70

Given the code fragments:

```

class R implements Runnable {
    public void run() { System.out.println("Run..."); }
}

class C implements Callable<String> {
    public String call() throws Exception { return "Call..."; }
}

```

and

```

ExecutorService es = Executors.newSingleThreadExecutor();
es.execute(new R()); // line n1
Future<String> f1 = es.submit(new C()); // line n2
System.out.println(f1.get());
es.shutdown();

```

What is the result?

- A. The program prints Run... and throws an exception.
- B. A compilation error occurs at line n1.
- C. Run...
Call...
- D. A compilation error occurs at line n2.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 71

Which two are elements of a singleton class? (Choose two.)

- A. a transient reference to point to the single instance
- B. a public method to instantiate the single instance

- C. a `public static` method to return a copy of the singleton reference
- D. a `private` constructor to the class
- E. a `public` reference to point to the single instance

Correct Answer: BD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 72

Given the code fragment:

```
Deque<String> queue = new ArrayDeque<>();  
queue.add("Susan");  
queue.add("Allen");  
queue.add("David");  
System.out.println(queue.pop());  
System.out.println(queue.remove());  
System.out.println(queue);
```

What is the result?

- A. David
David
[Susan, Allen]
- B. Susan
Susan
[Susan, Allen]
- C. Susan
Allen
[David]
- D. David
Allen
[Susan]
- E. Susan
Allen

[Susan, David]

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Explanation:

```
1 import java.util.ArrayDeque;
2
3 public class Program {
4     public static void main(String[] args) {
5
6         ArrayDeque<String> queue = new ArrayDeque<>();
7         queue.add("Susan");
8         queue.add("Allen");
9         queue.add("David");
10        System.out.println(queue.pop());
11        System.out.println(queue.remove());
12        System.out.println(queue);
13    }
14 }
15
16
```

CommandLine Arguments ...

Stdin Inputs...

 Execute

Save

Result...

CPU Time: 0.16 sec(s), Memory: 29452 kilobyte(s)

```
Susan
Allen
[David]
```


QUESTION 73

Given:

```
public class Vehicle {
    int vId;
    String vName;
    public Vehicle(int vIdArg, String vNameArg) {
        this.vId = vIdArg;
        this.vName = vNameArg;
    }
    public int getVId() { return vId; }
    public String getVName() { return vName; }
    public String toString() {
        return vName;
    }
}
```

and the code fragment:

```
List<Vehicle> vehicle = Arrays.asList(
    new Vehicle(2, "Car"),
    new Vehicle(3, "Bike"),
    new Vehicle(1, "Truck"));
vehicle.stream()
    // line n1
    .forEach(System.out::print);
```

Which two code fragments, when inserted at line n1 independently, enable the code to print TruckCarBike?

- A. `.sorted ((v1, v2) -> v1.getVId() < v2.getVId())`
- B. `.sorted (Comparable.comparing (Vehicle::getVName)).reversed ()`
- C. `.map (v -> v.getVId())`
`.sorted ()`
- D. `.sorted((v1, v2) -> Integer.compare(v1.getVId(), v2.getVId()))`
- E. `.sorted(Comparator.comparing ((Vehicle v) -> v.getVId()))`

Correct Answer: DE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 74

Given the code fragment:

```
List<String> valList = Arrays.asList("", "George", "", "John", "Jim");
Long newVal = valList.stream()           // line n1
    .filter(x -> !x.isEmpty())
    .count();                           // line n2
System.out.print(newVal);
```

What is the result?

- A. A compilation error occurs at line n2.
- B. 3
- C. 2
- D. A compilation error occurs at line n1.

Correct Answer: A

Section: (none)

Explanation



Explanation/Reference:

QUESTION 75

Given the code fragment:

```
// Login time:2015-01-12T21:58:18.817Z
Instant loginTime = Instant.now();
Thread.sleep(1000);

// Logout time:2015-01-12T21:58:19.880Z
Instant logoutTime = Instant.now();

loginTime = loginTime.truncatedTo(ChronoUnit.MINUTES); // line n1
logoutTime = logoutTime.truncatedTo(ChronoUnit.MINUTES);

if (logoutTime.isAfter(loginTime))
    System.out.println("Logged out at:"+logoutTime);
else
    System.out.println("Can't logout");
```

What is the result?

- A. A compilation error occurs at line n1.
- B. Logged out at: 2015-01-12T21:58:19.880Z
- C. Can't logout
- D. Logged out at: 2015-01-12T21:58:00Z

Correct Answer: D

Section: (none)



Explanation

Explanation/Reference:

QUESTION 76

Given the code fragment:

```
ProductCode<Number, Integer> c1 = new ProductCode<Number, Integer>(); /* c1
instantiation */
ProductCode<Number, String> c2 = new ProductCode<Number, String>(); /* c2
instantiation */
```

You have been asked to define the `ProductCode` class. The definition of the `ProductCode` class must allow `c1` instantiation to succeed and cause a compilation

error on c2 instantiation.

Which definition of ProductCode meets the requirement?

- A.

```
class ProductCode<T, S<Integer>> {  
    T c1;  
    S c2;  
}
```
- B.

```
class ProductCode<T, S extends T> {  
    T c1;  
    S c2;  
}
```
- C.

```
class ProductCode<T, S> {  
    T c1;  
    S c2;  
}
```
- D.

```
class ProductCode<T, S super T> {  
    T c1;  
    S c2;  
}
```

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 77

Given the code fragment:

```
Map<Integer, Integer> mVal = new HashMap<>();  
mVal.put(1, 10);  
mVal.put(2, 20);  
//line n1  
c.accept(1, 2);  
mVal.forEach(c);
```

Which statement can be inserted into line n1 to print 1,2; 1,10; 2,20;?

- A. BiConsumer<Integer,Integer> c = (i, j) -> {System.out.print (i + "," + j+ "; ");};
- B. BiFunction<Integer, Integer, String> c = (i, j) -> {System.out.print (i + "," + j+ "; ");};
- C. BiConsumer<Integer, Integer, String> c = (i, j) -> {System.out.print (i + "," + j+ "; ");};
- D. BiConsumer<Integer, Integer, Integer> c = (i, j) -> {System.out.print (i + "," + j+ "; ");};

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

Reference: <https://www.concretepage.com/java/jdk-8/java-8-biconsumer-bifunction-bipredicate-example>

QUESTION 78

Given the code fragment:

```
List<String> nums = Arrays.asList("EE", "SE");
String ans = nums
    .parallelStream()
    .reduce("Java ", (a, b) -> a.concat(b));
System.out.print(ans);
```

What is the result?

- A. Java EEJava EESE
- B. Java EESE
- C. The program prints either:
Java EEJava SE
or
Java SEJava EE
- D. Java EEJava SE

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 79

Given the code fragments :

```
public class Product {  
    String name;  
    Integer price;  
    Product(String name, Integer price) {  
        this.name = name;  
        this.price = price;  
    }  
    public void printVal(){ System.out.print(name + " Price:" + price + " "); }  
    public void setPrice(int price) { this.price = price; }  
    public Integer getPrice() { return price; }  
}
```

and

```
List<Product> li = Arrays.asList(new Product("TV", 1000), new Product("Refrigerator",  
2000));  
Consumer<Product> raise = e -> e.setPrice(e.getPrice() + 100);  
li.forEach(raise);  
li.stream().forEach(Product::printVal);
```

What is the result?

- A. TV Price :110 Refrigerator Price :2100
- B. A compilation error occurs.
- C. TV Price :1000 Refrigerator Price :2000
- D. The program prints nothing.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 80

Given:

```
interface P { public void method1(); }  
  
interface Q extends P { public void method1(); }  
  
interface R extends P { public void method2(); }  
  
interface S { public default void method() { } }  
  
interface T { public void method1(); public void method2(); }  
  
interface U { public void method1(); public abstract void method2(); }
```

Which two interfaces can you use to create lambda expressions? (Choose two.)

- A. T
- B. R
- C. P
- D. S
- E. Q
- F. U

Correct Answer: CD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 81

Given the code fragment:

```

final List<String> list = new CopyOnWriteArrayList<>();
final AtomicInteger ai = new AtomicInteger(0);
final CyclicBarrier barrier = new CyclicBarrier(2, new Runnable() {
    public void run() { System.out.println(list); }
});
Runnable r = new Runnable() {
    public void run() {
        try {
            Thread.sleep(1000 * ai.incrementAndGet());
            list.add("X");
            barrier.await();
        } catch (Exception ex) {
        }
    }
};
new Thread(r).start();
new Thread(r).start();
new Thread(r).start();
new Thread(r).start();

```

What is the result ?

- A. [X]
[X, X]
[X, X, X]
[X, X, X, X]
- B. [X, X]
- C. [X]
[X, X]
[X, X, X]
- D. [X, X]
[X, X, X, X]

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 82

Given that these files exist and are accessible:

```
/company/emp/info.txt  
/company/emp/benefits/b1.txt
```

and given the code fragment:

```
// line n1  
stream.forEach(s -> System.out.print(s));
```

Which code fragment can be inserted at line n1 to enable the code to print only /company/emp?

- A. `Stream<Path> stream = Files.list (Paths.get ("/company"));`
- B. `Stream<Path> stream = Files.find(
Paths.get ("/company"), 1,
(p,b) -> b.isDirectory (), FileVisitOption.FOLLOW_LINKS);`
- C. `Stream<Path> stream = Files.walk (Paths.get ("/company"));`
- D. `Stream<Path> stream = Files.list (Paths.get ("/company/emp"));`

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 83

Given:

```

class Person {
    String name;
    int age;
    public Person(String name, int age) {
        this.name = name;
        this.age = age;
    }
    public String getName(){ return name; }
    public int getAge(){ return age; }
}

```

and the code fragment:

```

List<Person> sts = Arrays.asList(
    new Person("Jack", 30),
    new Person("Mike Hill", 21),
    new Person("Thomas Hill", 24));
Stream<Person> resList = sts.stream().filter(s -> s.getAge() >= 25); // line n1
long count = resList.filter(s -> s.getName().contains("Hill")).count();
System.out.print(count);

```

What is the result?

- A. 0
- B. A compilation error occurs at line n1.
- C. An Exception is thrown at run time.
- D. 2

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 84

Which class definition compiles?

- A.

```
class Vehicle {
    int id;
    public void start() {
        public class Engine {    int eNo = id;    }
    }
}
```
- B.

```
class Computer {
    private Card sCard = new SoundCard();
    private abstract class Card { }
    private class SoundCard extends Card { }
}
```
- C.

```
class Block {
    int bno;
    static class Counter {
        int locator;
        Counter() { locator = bno; }
    }
}
```
- D.

```
class Product {
    interface Moveable { void move(); }
    Moveable mProduct = new Moveable() {
        void move() { }
    };
}
```

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 85

Given the code fragment:

```
Deque<Integer> nums = new ArrayDeque<>();  
nums.add(1000);  
nums.push(2000);  
nums.add(3000);  
nums.push(4000);  
Integer i1 = nums.remove();  
Integer i2 = nums.pop();  
System.out.println(i1 + " : " + i2);
```

What is the result?

- A. 4000 : 2000
- B. 4000 : 1000
- C. 1000 : 4000
- D. 1000 : 2000

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 86

Given that `version.txt` is accessible and contains:

1234567890

and given the code fragment:

```
try (FileInputStream fis = new FileInputStream("version.txt");
    InputStreamReader isr = new InputStreamReader(fis);
    BufferedReader br = new BufferedReader(isr);) {
    if (br.markSupported()) {
        System.out.print((char) br.read());
        br.mark(2);
        System.out.print((char) br.read());
        br.reset();
        System.out.print((char) br.read());
    }
} catch (Exception e) {
    e.printStackTrace();
}
```

What is the result?

- A. 121
- B. 122
- C. 135
- D. The program prints nothing.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 87

```

7. BiPredicate<String, String> bp = (String s1, String s2) -> s1.contains("SG") &&
   s2.contains("Java");
8. BiFunction<String, String, Integer> bf = (String s1, String s2) -> {
9.     int fee = 0;
10.    if (bp.test(s1, s2)) {
11.        fee = 100;
12.    }
13.    return fee;
14. };
15. int fee1 = bf.apply("D101SG", "Java Programming");
16. System.out.println(fee1);

```

What is the result?

- A. A compilation error occurs at line 7.
- B. 100
- C. A compilation error occurs at line 8.
- D. A compilation error occurs at line 15.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 88

Given the `Greetings.properties` file, containing:

```

HELLO_MSG = Hello, everyone!
GOODBYE_MSG = Goodbye everyone!

```

and given:

```
import java.util.Enumeration;
import java.util.Locale;
import java.util.ResourceBundle;

public class ResourcesApp {
    public void loadResourceBundle() {
        ResourceBundle resource = ResourceBundle.getBundle("Greetings", Locale.US);
        System.out.println(resource.getObject(1));
    }
    public static void main(String[] args) {
        new ResourcesApp().loadResourceBundle();
    }
}
```

What is the result?

- A. Compilation fails.
- B. GOODBY_MSG
- C. Hello, everyone!
- D. Goodbye everyone!
- E. HELLO_MSG

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 89

Given the code fragments:

```
public class Test {  
    List<String> list = null;  
    public void printValues() {  
        System.out.print(getList());  
    }  
    public List<String> getList(){ return list; }  
    public void setList(List<String> newList){ list = newList; }  
}
```

and

```
List<String> li = Arrays.asList("Dog", "Cat", "Mouse");  
Test t = new Test();  
t.setList(li.stream().collect(Collectors.toList()));  
t.getList().forEach(Test::printValues);
```

What is the result?

- A. null
- B. A compilation error occurs.
- C. DogCatMouse
- D. [Dog, Cat, Mouse]

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 90

Given the records from the STUDENT table:

sid	sname	semail
111	James	james@uni.com
112	Jane	jane@uni.com
114	John	john@uni.com

Given the code fragment:

```
public static void main(String[] args) throws SQLException {
    //code to load and register valid jdbc driver go here
    Connection con = DriverManager.getConnection(URL, username, password);
    Statement st = con.createStatement(ResultSet.TYPE_SCROLL_INSENSITIVE,
                                       ResultSet.CONCUR_UPDATABLE);

    st.execute("SELECT * FROM student");
    ResultSet rs = st.getResultSet();
    rs.absolute(3);
    rs.moveToInsertRow();
    rs.updateInt(1, 113);
    rs.updateString(2, "Jannet");
    rs.updateString(3, "jannet@uni.com");
    rs.updateRow();
    rs.refreshRow();
    System.out.println(rs.getInt(1) + " : " + rs.getString(2) + " : " + rs.getString
(3));
}
```

Assume that the URL, username, and password are valid.

What is the result?

- A. The STUDENT table is not updated and the program prints:
114 : John : john@uni.com
- B. The STUDENT table is updated with the record:
113 : Jannet : jannet@uni.com
and the program prints:
114 : John : john@uni.com
- C. The STUDENT table is updated with the record:
113 : Jannet : jannet@uni.com
and the program prints:

113 : Jannet : jannet@uni.com

D. A `SQLException` is thrown at run time.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 91

Which two statements are true about the Fork/Join Framework? (Choose two.)

- A. The `RecursiveTask` subclass is used when a task does not need to return a result.
- B. The Fork/Join framework can help you take advantage of multicore hardware.
- C. The Fork/Join framework implements a work-stealing algorithm.
- D. The Fork/Join solution when run on multicore hardware always performs faster than standard sequential solution.

Correct Answer: AC

Section: (none)

Explanation

Explanation/Reference:

Reference: <https://www.logicbig.com/tutorials/core-java-tutorial/java-multi-threading/fork-and-join.html>

QUESTION 92

Which two statements are true about synchronization and locks? (Choose two.)

- A. A thread automatically acquires the intrinsic lock on a synchronized statement when executed.
- B. The intrinsic lock will be retained by a thread if return from a synchronized method is caused by an uncaught exception.
- C. A thread exclusively owns the intrinsic lock of an object between the time it acquires the lock and the time it releases it.
- D. A thread automatically acquires the intrinsic lock on a synchronized method's object when entering that method.
- E. Threads cannot acquire intrinsic locks on classes.

Correct Answer: AB

Section: (none)

Explanation

Explanation/Reference:

Reference: <https://docs.oracle.com/javase/tutorial/essential/concurrency/locksycn.html>

QUESTION 93

Given the code fragment:

```
//line n1  
Double d = str.average().getAsDouble();  
System.out.println("Average = " + d);
```

Which should be inserted into line n1 to print Average = 2.5?

- A. `IntStream str = Stream.of (1, 2, 3, 4);`
- B. `IntStream str = IntStream.of (1, 2, 3, 4);`
- C. `DoubleStream str = Stream.of (1.0, 2.0, 3.0, 4.0);`
- D. `Stream str = Stream.of (1, 2, 3, 4);`

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 94

Given:

```

class Student {
    String course, name, city;
    public Student(String name, String course, String city) {
        this.course = course; this.name = name; this.city = city;
    }
    public String toString() {
        return course + ":" + name + ":" + city;
    }
    public String getCourse() { return course; }
    public String getName() { return name; }
    public String getCity() { return city; }
}

```

and the code fragment:

```

List<Student> stds = Arrays.asList(
    new Student ("Jessy", "Java ME", "Chicago"),
    new Student ("Helen", "Java EE", "Houston"),
    new Student ("Mark", "Java ME", "Chicago"));
stds.stream()
    .collect(Collectors.groupingBy(Student::getCourse))
    .forEach(src, res) -> System.out.println(src));

```

What is the result?

- A. [Java EE: Helen:Houston]
[Java ME: Jessy:Chicago, Java ME: Mark:Chicago]
- B. Java EE
Java ME
- C. [Java ME: Jessy:Chicago, Java ME: Mark:Chicago]
[Java EE: Helen:Houston]
- D. A compilation error occurs.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

Explanation:

Your Code ...

```
1 public class Student {
2     String course, name, city;
3     public Student (String name, String course, String cit
4         this.course = course; this.name = name; this.city
5     }
6     public String toString() {
7         return course + ":" + name + ":" + city;
8     }
9     public String getCourse() {return course; }
10    public String getName() {return name; }
11    public String getCity() {return city; }
12
13    List<Student> stds = Arrays.asList (
14        new Student ("Jessy", "Java ME", "Chicago"),
15        new Student ("Helen", "Java ME", "Houston"),
16        new Student ("Mark", "Java ME", "Chicago"));
17    stds.stream()
18        .collect (Collectors.groupBy(Student::getCourse))
19        .forEach (src, res) -> System.out.println(src));
20 }
21
```

CommandLine Arguments ...

Stdin Inputs...

⊙ Execute

Sc

Result...

CPU Time: sec(s), Memory: kilobyte(s)

```
/Student.java:17: error: <identifier> expected
    stds.stream()
           ^
/Student.java:17: error: ';' expected
    stds.stream()
           ^
2 errors
```

QUESTION 95

Given the definition of the Employee class:

```
class Employee {
    String dept, name;
    public Employee(String d, String n) {
        dept = d;
        name = n;
    }
    public String toString() {
        return getDept() + ":" + getName();
    }
    public String getDept() { return dept; }
    public String getName() { return name; }
}
```

and this code fragment:

```
List<Employee> emps = Arrays.asList(new Employee("sales", "Ada"),
    new Employee("sales", "Bob"),
    new Employee("hr", "Bob"),
    new Employee("hr", "Eva"));
Stream<Employee> s = emps.stream()
    .sorted(Comparator.comparing((Employee e) -> e.getDept())
        .thenComparing((Employee e) -> e.getName()));
List<Employee> eSorted = s.collect(Collectors.toList());
System.out.println(eSorted);
```

What is the result?

A. [sales:Ada, hr:Bob, sales:Bob, hr:Eva]

- B. [Ada:sales, Bob:sales, Bob:hr, Eva:hr]
- C. [hr:Eva, hr:Bob, sales:Bob, sales:Ada]
- D. [hr:Bob, hr:Eva, sales:Ada, sales:Bob]

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 96

Given the code fragments:

```
class ThreadRunner implements Runnable {
    public void run () { System.out.print ("Runnable") ; }
}
class ThreadCaller implements Callable {
    Public String call () throws Exception {return "Callable"; }
}
```

and

```
ExecutorService es = Executors.newCachedThreadPool ();
Runnable r1 = new ThreadRunner ();
Callable c1 = new ThreadCaller ();
// line n1
es.shutdown();
```

Which code fragment can be inserted at line n1 to start r1 and c1 threads?

- A. `Future<String> f1 = (Future<String>) es.submit (r1);`
`es.execute (c1);`
- B. `es.execute (r1);`
`Future<String> f1 = es.execute (c1) ;`
- C. `Future<String> f1 = (Future<String>) es.execute(r1);`
`Future<String> f2 = (Future<String>) es.execute(c1);`
- D. `es.submit(r1);`
`Future<String> f1 = es.submit (c1);`

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:



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