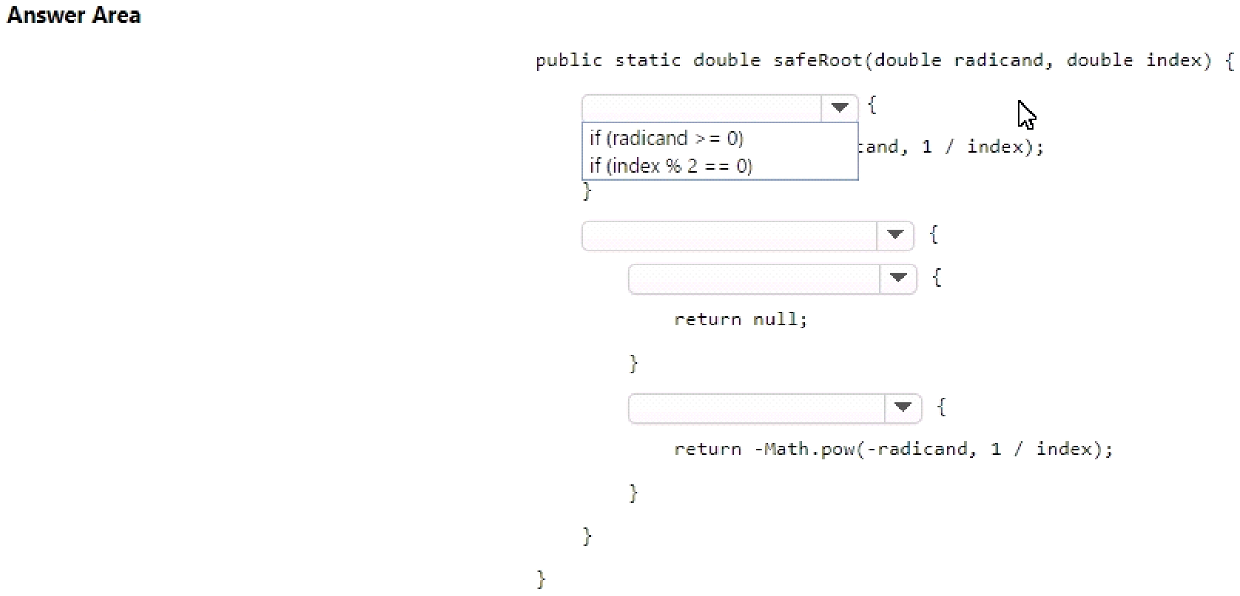
Question: 1

HOTSPOT

You are writing a Java method named safeRoot. The method must meet the following requirements:

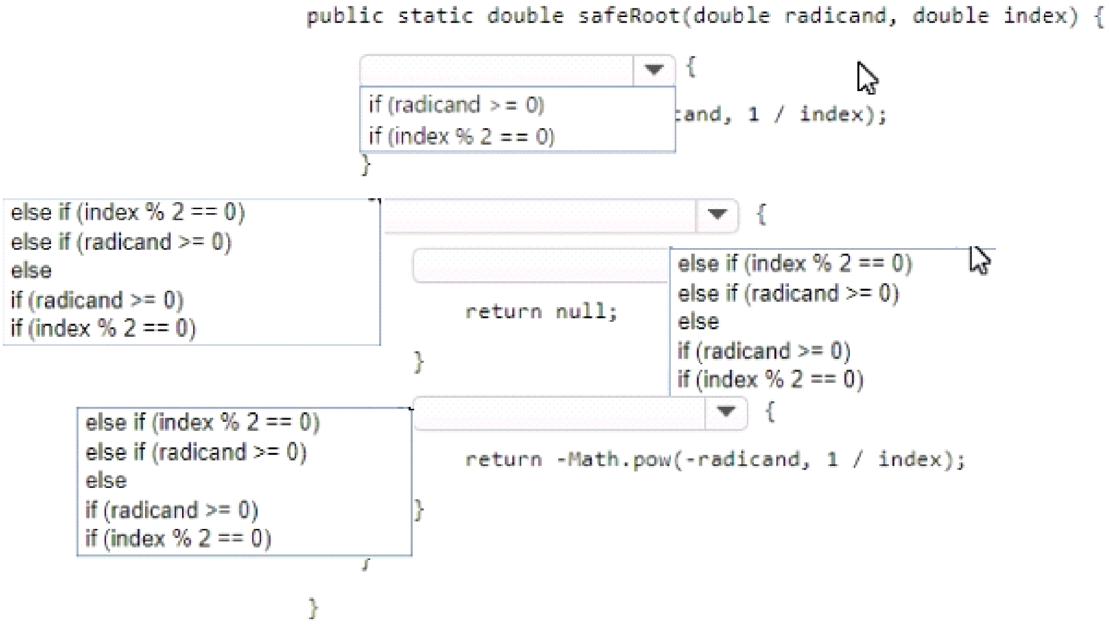
- Accept two `double` parameters `radicand` and `index`
- If `radicand` is negative and `index` is even, return `null`
- If `radicand` is negative and `index` is odd, return `-Math.pow(-radicand, 1 / index)`
- Otherwise, return `Math.pow(radicand, 1 / index)`

How should you complete the code? To answer, select the appropriate code segments in the answer area. NOTE: Each correct selection is worth one point.



Answer Area

```
public static double safeRoot(double radicand, double index) {
                                 {
                                and, 1 / index);
    }
                                   {
                                   {
            return null;
        }
                                   {
            return -Math.pow(-radicand, 1 / index);
        }
    }
}
```



```
public static double safeRoot(double radicand, double index) {
    [          ▼] {
        :and, 1 / index);
    }
    [          ▼] {
        [          ]
            return null;
        }
        [          ▼] {
            return -Math.pow(-radicand, 1 / index);
        }
    }
}
```

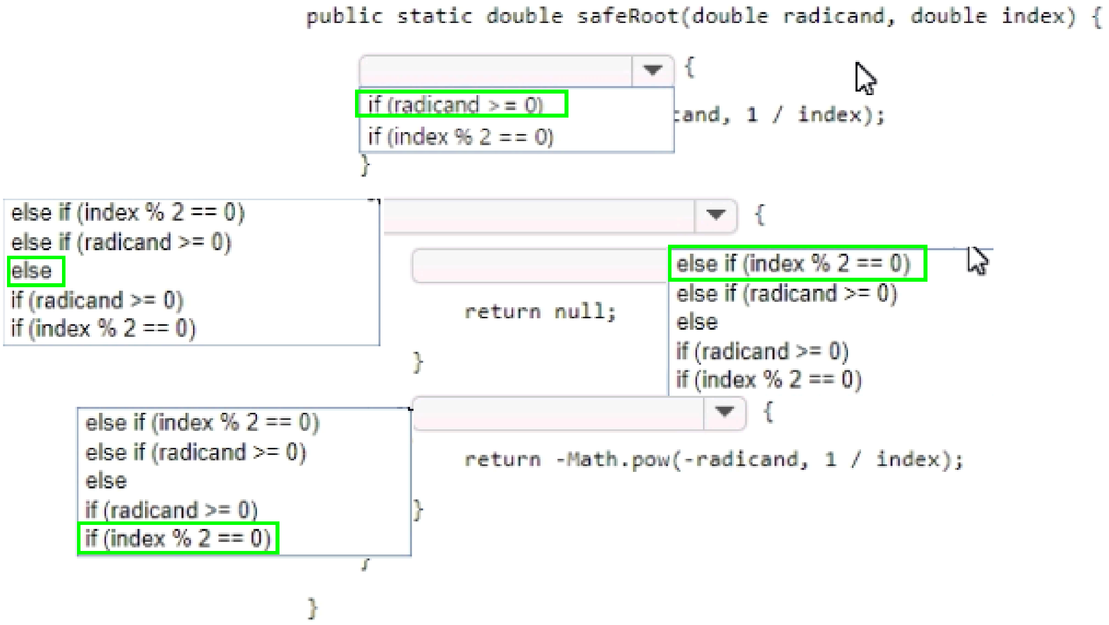
if (radicand >= 0)
if (index % 2 == 0)

else if (index % 2 == 0)
else if (radicand >= 0)
else
if (radicand >= 0)
if (index % 2 == 0)

else if (index % 2 == 0)
else if (radicand >= 0)
else
if (radicand >= 0)
if (index % 2 == 0)

else if (index % 2 == 0)
else if (radicand >= 0)
else
if (radicand >= 0)
if (index % 2 == 0)

Answer:



```
public static double safeRoot(double radicand, double index) {
    [          ▼] {
        :and, 1 / index);
    }
    [          ▼] {
        [          ]
            return null;
        }
        [          ▼] {
            return -Math.pow(-radicand, 1 / index);
        }
    }
}
```

[✓ if (radicand >= 0)]
if (index % 2 == 0)

else if (index % 2 == 0)
else if (radicand >= 0)
[✓ else]
if (radicand >= 0)
if (index % 2 == 0)

[✓ else if (index % 2 == 0)]
else if (radicand >= 0)
else
if (radicand >= 0)
if (index % 2 == 0)

else if (index % 2 == 0)
else if (radicand >= 0)
else
if (radicand >= 0)
[✓ if (index % 2 == 0)]

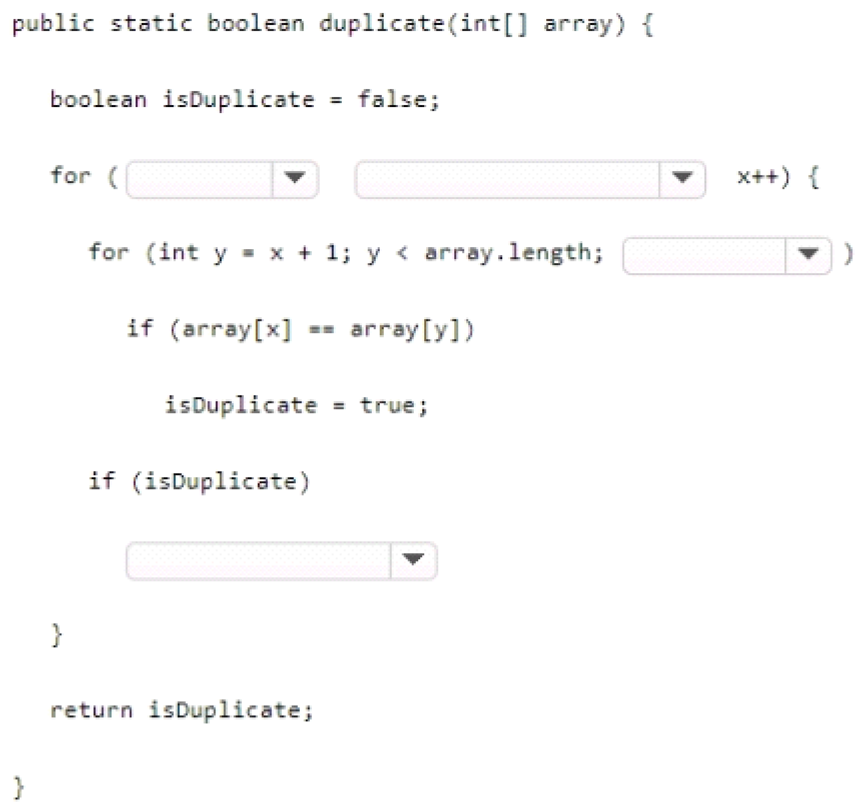
Question: 2

HOTSPOT

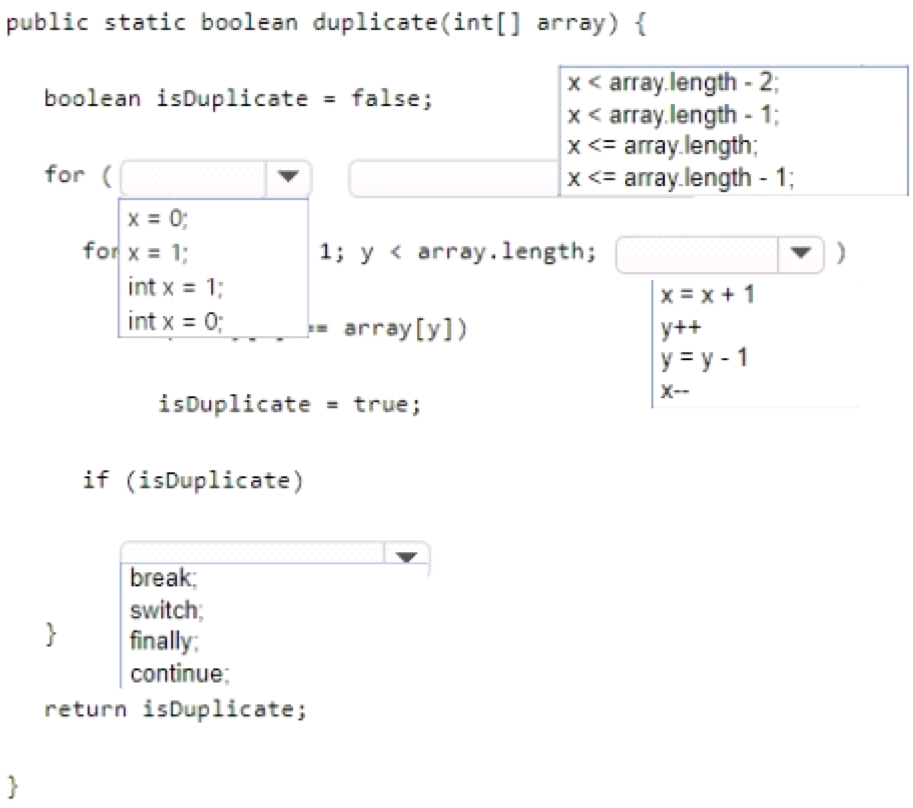
You work as an intern Java programmer at Adventure Works. Your team lead asks you to create a method. The method must meet the following requirements:

- Accept an `int` array
- Check for duplicate values in the array
- Stop the outer loop as soon as a duplicate value has been detected and return `true`
- Return `false` if all values in the array are unique

How should you complete the code? To answer, select the appropriate code segments in the answer area. NOTE: Each correct selection is worth one point.

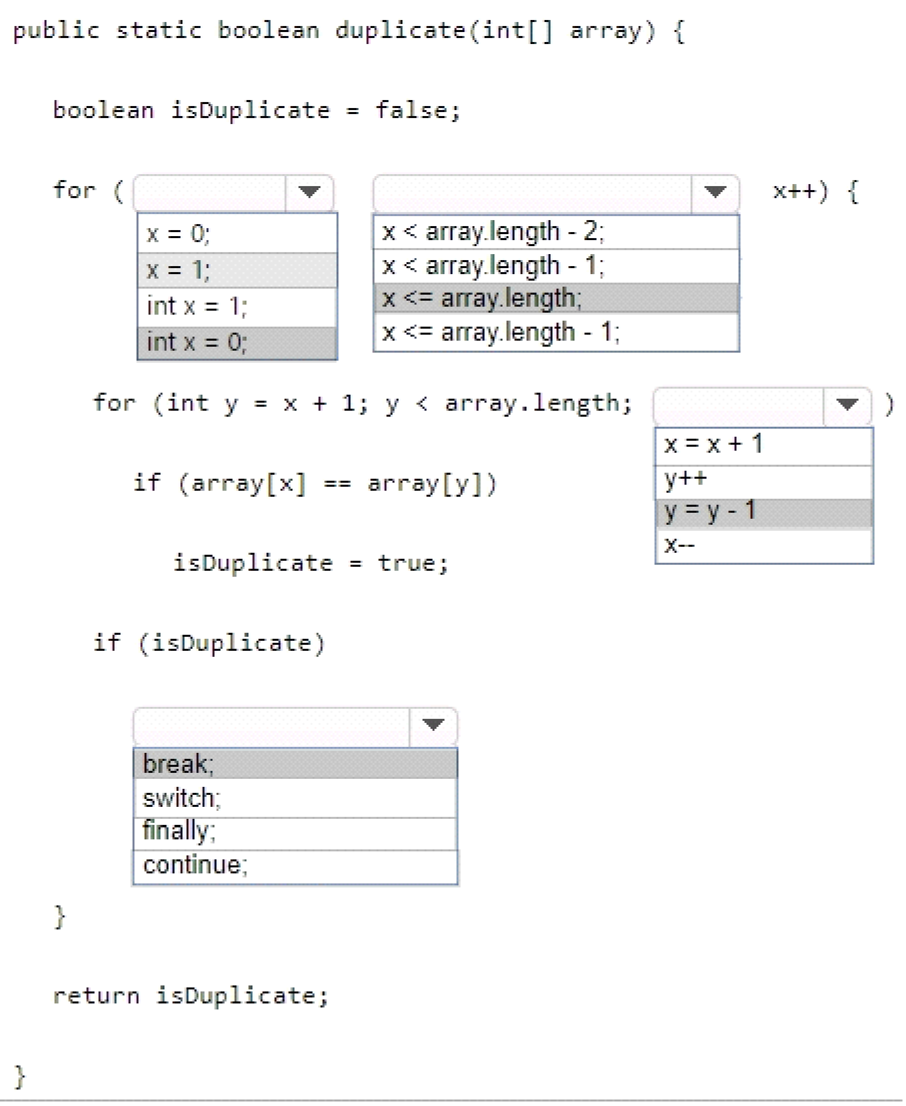


```
public static boolean duplicate(int[] array) {

  boolean isDuplicate = false;

  for ( [          ▼]  [                      ▼]  x++) {

    for (int y = x + 1; y < array.length; [          ▼] )

      if (array[x] == array[y])

        isDuplicate = true;

    if (isDuplicate)

      [                ▼]

  }

  return isDuplicate;

}
```



```
public static boolean duplicate(int[] array) {

   boolean isDuplicate = false;

   for (

      for                   1; y < array.length;          )

                         = array[y])

         isDuplicate = true;

      if (isDuplicate)

   }
   return isDuplicate;

}
```

Answer:



```
public static boolean duplicate(int[] array) {

   boolean isDuplicate = false;

   for (                              x++) {

      for (int y = x + 1; y < array.length;          )

         if (array[x] == array[y])

            isDuplicate = true;

      if (isDuplicate)



   }

   return isDuplicate;

}
```

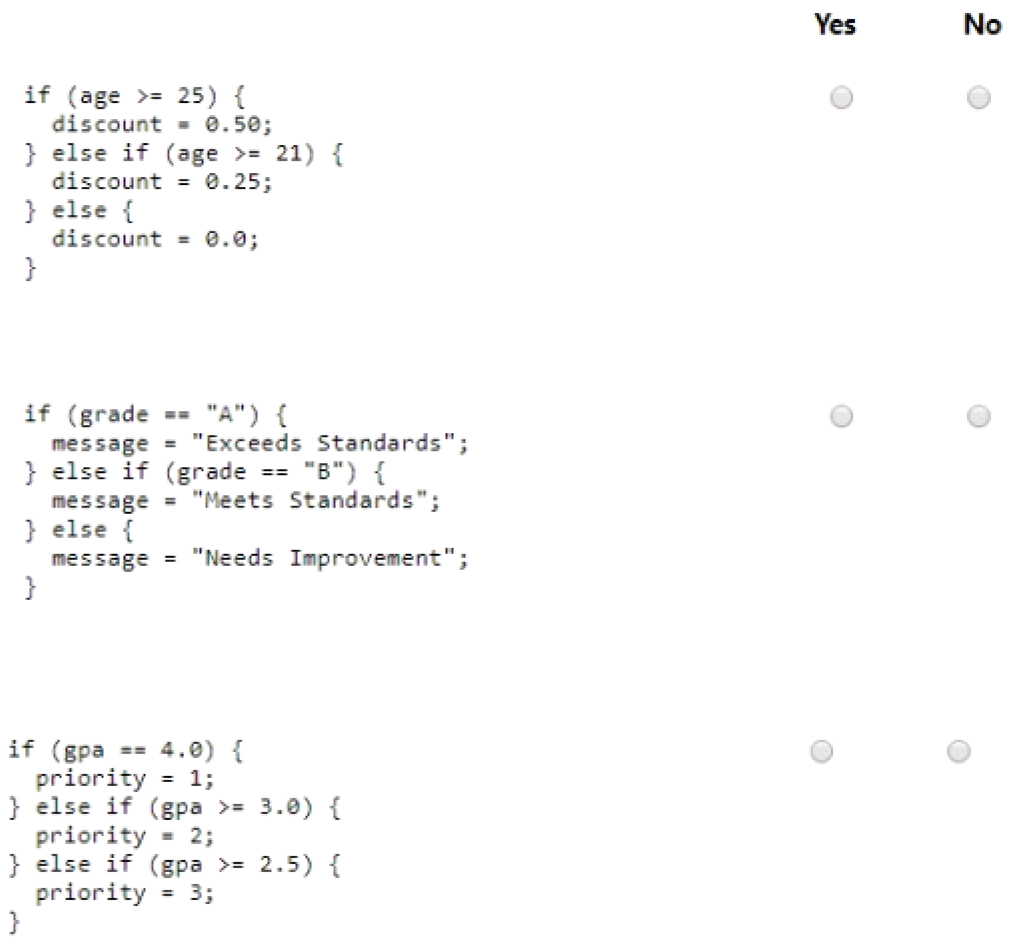
Question: 3

HOTSPOT

You are interviewing for a job as a Java developer. You need to demonstrate your understanding of switch statements.

For each of the following code segments, select Yes if the code segment can be changed to a switch statement with up to three case statements. Otherwise, select No.

NOTE: Each correct selection is worth one point.



Yes No

```
if (age >= 25) {
  discount = 0.50;
} else if (age >= 21) {
  discount = 0.25;
} else {
  discount = 0.0;
}
```

○ ○

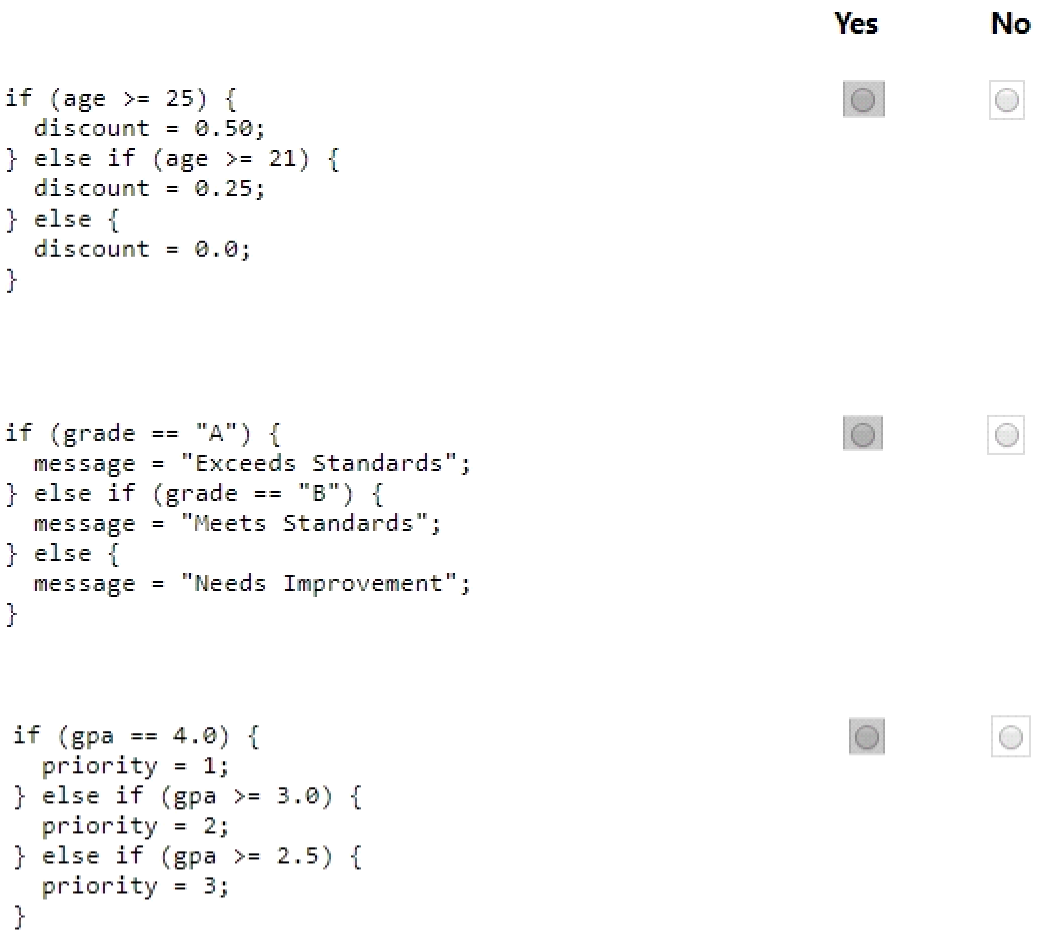
```
if (grade == "A") {
  message = "Exceeds Standards";
} else if (grade == "B") {
  message = "Meets Standards";
} else {
  message = "Needs Improvement";
}
```

○ ○

```
if (gpa == 4.0) {
  priority = 1;
} else if (gpa >= 3.0) {
  priority = 2;
} else if (gpa >= 2.5) {
  priority = 3;
}
```

○ ○

Answer:



Yes No

```
if (age >= 25) {
  discount = 0.50;
} else if (age >= 21) {
  discount = 0.25;
} else {
  discount = 0.0;
}
```

● ○

```
if (grade == "A") {
  message = "Exceeds Standards";
} else if (grade == "B") {
  message = "Meets Standards";
} else {
  message = "Needs Improvement";
}
```

● ○

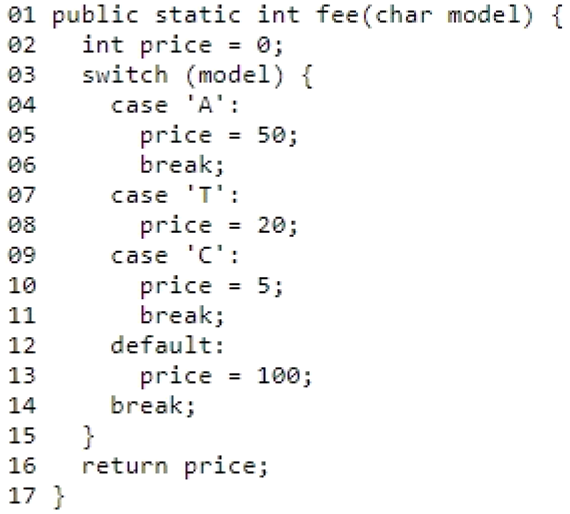
```
if (gpa == 4.0) {
  priority = 1;
} else if (gpa >= 3.0) {
  priority = 2;
} else if (gpa >= 2.5) {
  priority = 3;
}
```

● ○

Question: 4

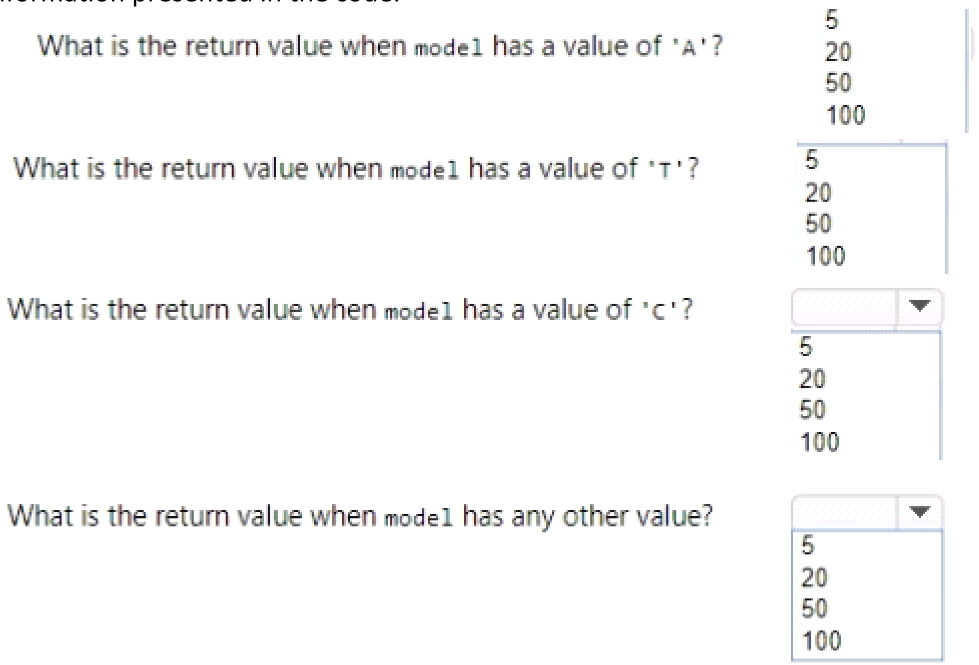
HOTSPOT

You need to evaluate the following code. Line numbers are included for reference only.



```
public static int fee(char model) {
  int price = 0;
  switch (model) {
    case 'A':
      price = 50;
      break;
    case 'T':
      price = 20;
    case 'C':
      price = 5;
      break;
    default:
      price = 100;
    break;
  }
  return price;
}
```

Use the drop-down menus to select the answer choice that answers each question based on the information presented in the code.



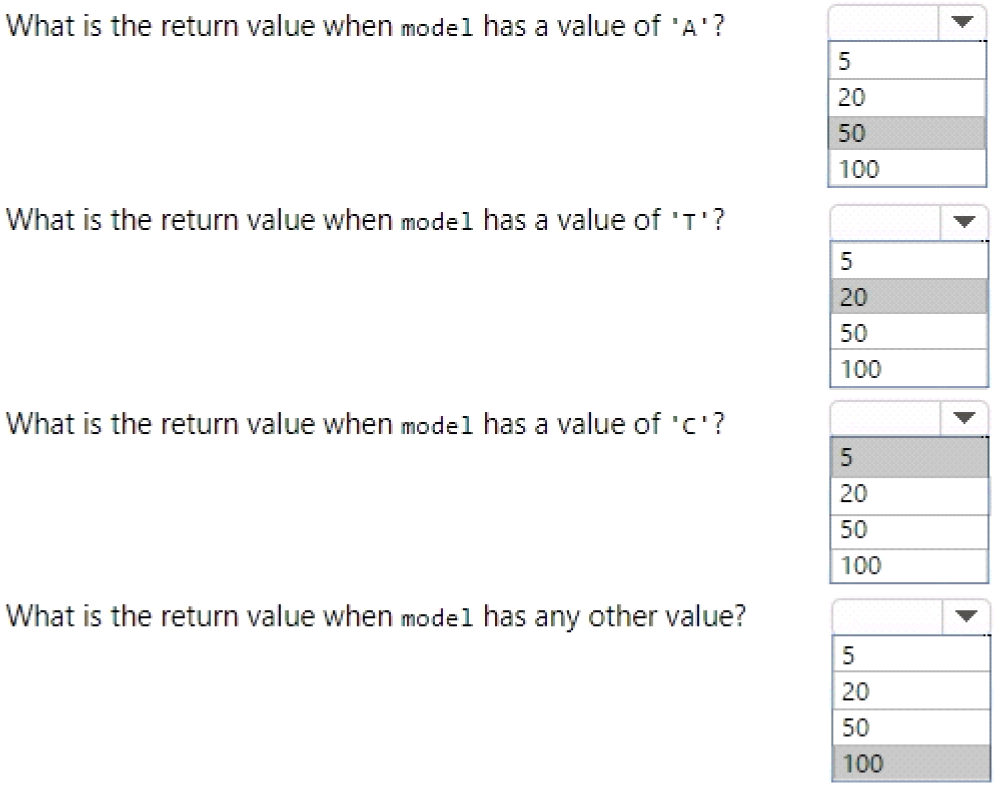
What is the return value when model has a value of 'A'?

What is the return value when model has a value of 'T'?

What is the return value when model has a value of 'C'?

What is the return value when model has any other value?

Answer:



What is the return value when `model` has a value of `'A'`?

- 5
- 20
- [✓ 50]
- 100

What is the return value when `model` has a value of `'T'`?

- 5
- [✓ 20]
- 50
- 100

What is the return value when `model` has a value of `'C'`?

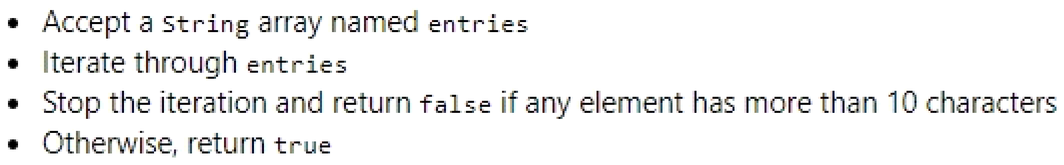
- [✓ 5]
- 20
- 50
- 100

What is the return value when `model` has any other value?

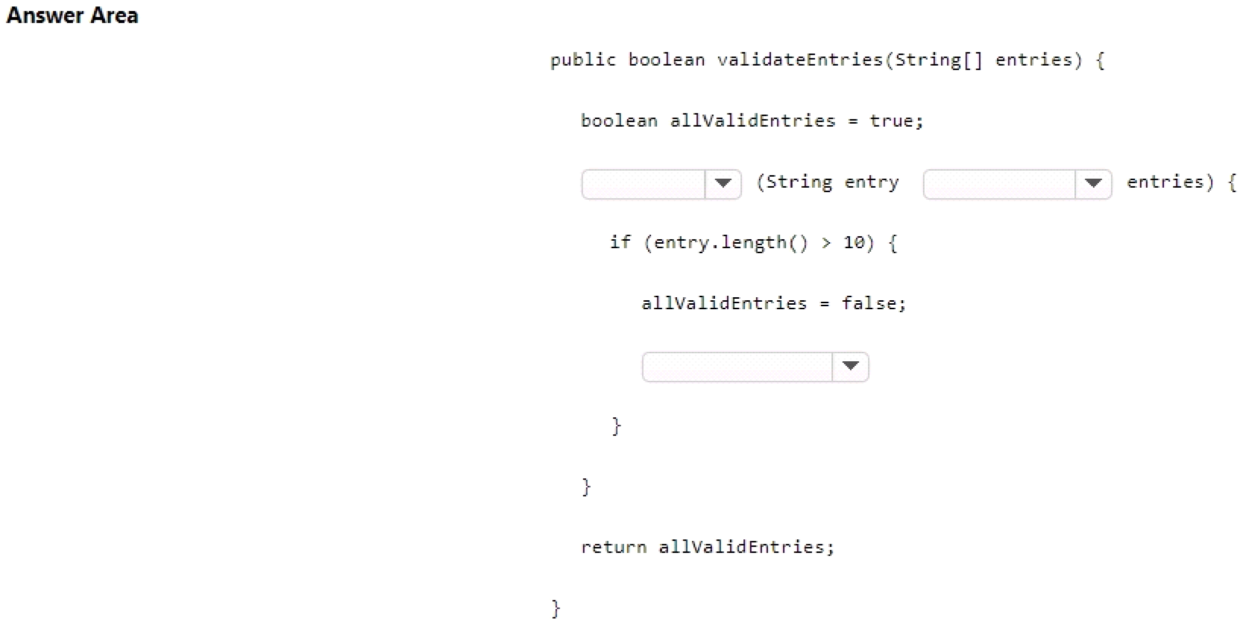
- 5
- 20
- 50
- [✓ 100]

Question: 5

HOTSPOT
You are writing a Java method.
The method must meet the following requirements:

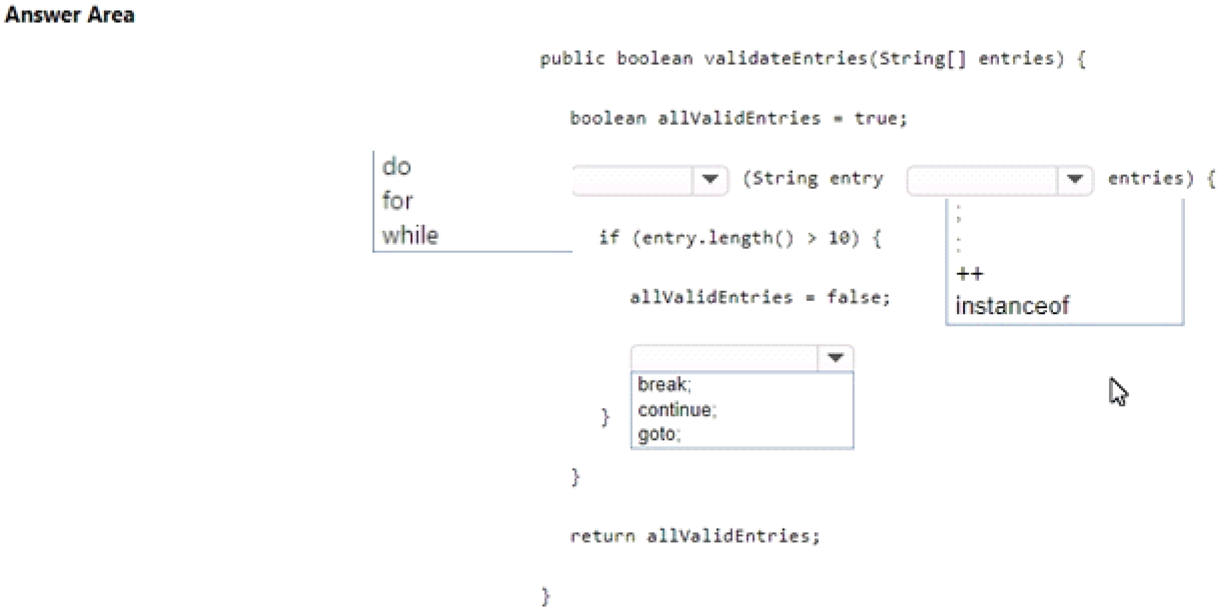


- Accept a `String` array named `entries`
- Iterate through `entries`
- Stop the iteration and return `false` if any element has more than 10 characters
- Otherwise, return `true`



Answer Area

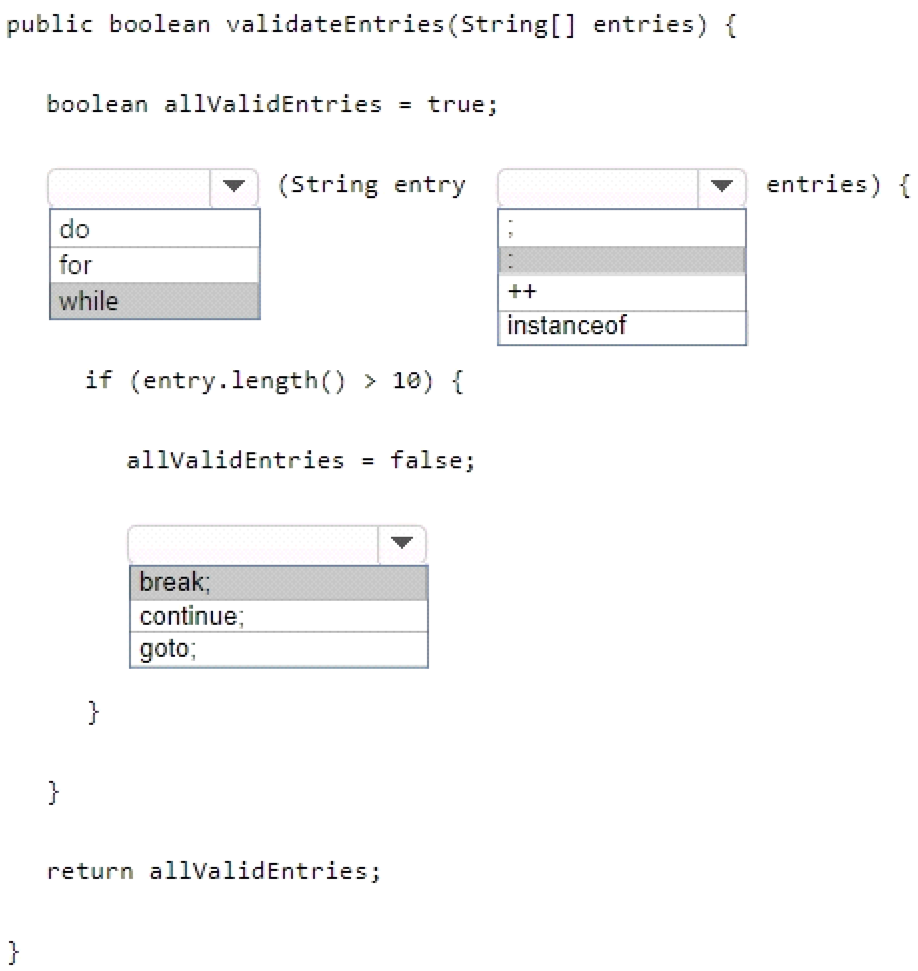
```
public boolean validateEntries(String[] entries) {

   boolean allValidEntries = true;

   [          ▼] (String entry [          ▼] entries) {

      if (entry.length() > 10) {

         allValidEntries = false;

         [            ▼]

      }

   }

   return allValidEntries;

}
```



Answer Area

```
public boolean validateEntries(String[] entries) {

   boolean allValidEntries = true;

   [          ▼] (String entry [          ▼] entries) {

      if (entry.length() > 10) {

         allValidEntries = false;

         [            ▼]

      }

   }

   return allValidEntries;

}
```

Answer:



```
public boolean validateEntries(String[] entries) {

   boolean allValidEntries = true;

                (String entry              entries) {

      if (entry.length() > 10) {

         allValidEntries = false;


      }

   }

   return allValidEntries;

}
```