

You are helping a coworker test the following form:

```
<!DOCTYPE html>
<html>
<body>
<h1>Contact Information</h1>
<form id="contact" action="processContact.php" >
  <p>First name: <input type="text" id="fname"></p>
  <p>Last name: <input type="text" id="lname"></p>
  <p><input id="sub" type="button" value="Submit form"></p>
</form>
<script>
  document.getElementById("sub").addEventListener("click",function(){
    var fname=document.getElementById("fname").value;
```

### Answer Area

True      False

- The form will submit to a script named contact.
- The form will submit only if the **first name** and **last name** are entered.
- The form will not submit because it is missing the submission method.

Variable x has a value of 5. Variable y has a value of 7.

For each of the following expressions, select **True** if the expression evaluates to true, or **False** if it does not.

Note: You will receive partial credit for each correct selection.

• • • •

### Answer Area

	True	False
$x < 7 \ \&\& \ y > 6$	<input checked="" type="radio"/>	<input type="radio"/>
$x == 6 \ \ \ y == 6$	<input type="radio"/>	<input checked="" type="radio"/>
$x != 7$	<input checked="" type="radio"/>	<input type="radio"/>
$!(x == y)$	<input checked="" type="radio"/>	<input type="radio"/>

Analyze the following code:

```
var x = 10;
function multiplyNumber(x) {
    try {
        const y = 15;
        y = (2 * x);
        console.log (y);
    }
    catch {
        console.log (3 * x);
    }
    finally {
        console.log (4 * x);
    }
}
x = multiplyNumber(x)
```

What is the console output?

- A. 20
- B. 30
- C. 20  
40
- D. 30  
40

You are creating a JavaScript program for an accounting system.

You write the following code. Line numbers are included for reference only.

```
01 name = "Becca";
02 address = "123 Olive St.";
03 while = Date.now();
04 color = "Red";
05 break = "No";
```

You evaluate the code to ensure that it follows JavaScript best practices.

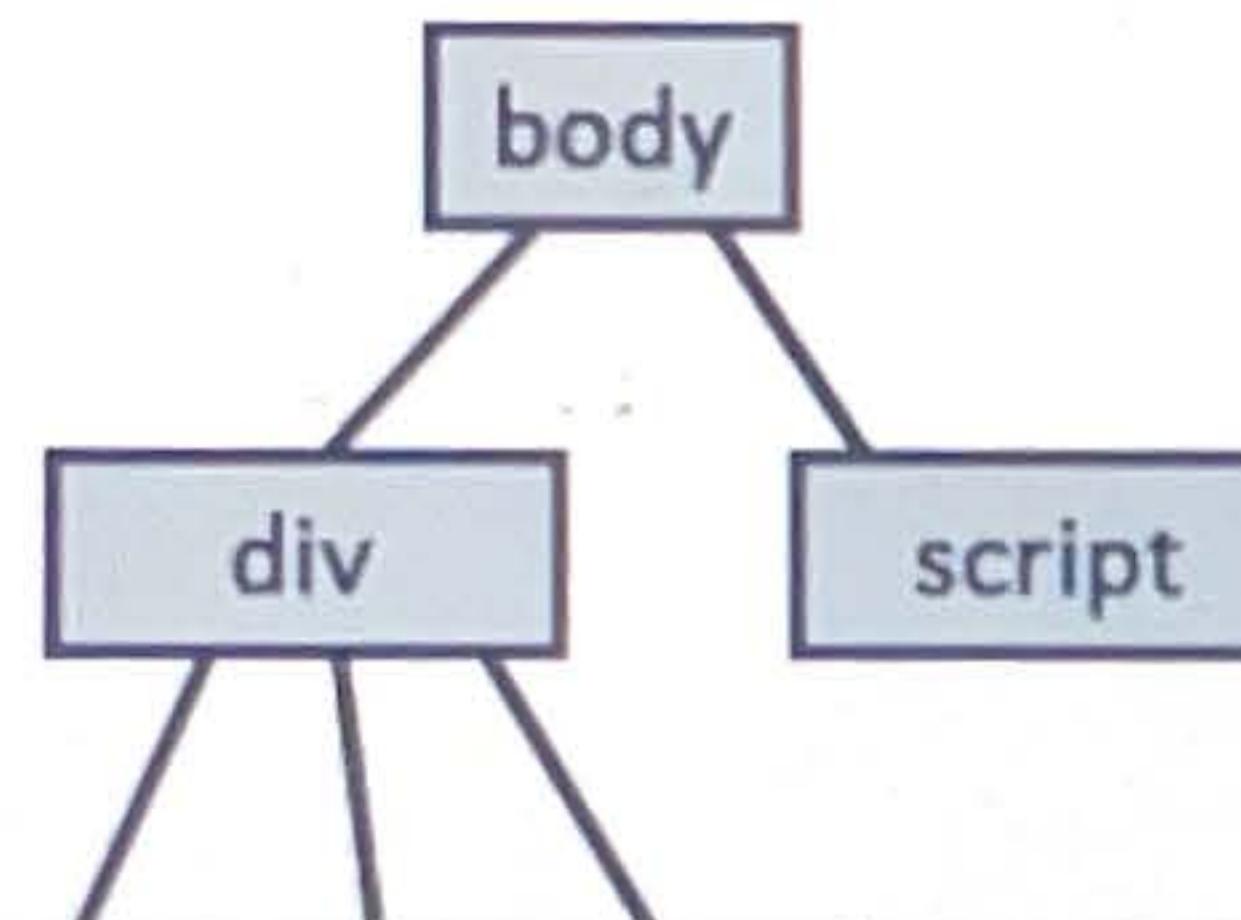
Which two lines of code contain reserved words? (Choose 2.)

- A. 01
- B. 02
- C. 03
- D. 04
- E. 05

Analyze the DOM Tree in the image. You need to insert an `img` element that will be the first element in the body.

Complete the code by selecting the correct option from each drop-down list.

Note: You will receive partial credit for each correct selection.



#### Answer Area

```
<script>
    var newImgElement = document.createElement("img");
    newImgElement. src = "_images/photo.jpg";
    var divElement = document. appendChild("div");
    document.body. insertBefore(newImgElement, divElement);
</script>
```

For each statement, select **True** or **False**.

Note: You will receive partial credit for each correct selection.

Answer Area



True      False

Internal JavaScript can be placed within the <head> tags.

Placing your scripts at the bottom of the page body lets the browser load the other elements of the page first.

Internal JavaScript is linked using the tag  
<script src="internal" type="text/javascript">.

You are developing a web page that displays student registration information.

You need to test the code to ensure that it retrieves and displays the student information correctly.

Complete the code by selecting the correct option from each drop-down list.

Note: You will receive partial credit for each correct selection.



#### Answer Area

```
<body>
<h2>New Student Registration</h2>
<script>
    function student(firstName, lastName, major, year) {
        this.firstName = first;
        this.lastName = last;
        this.major = major;
        this.year = year;
        this.info = function(){
            document.write( "<p>You are registered as " + this.firstName + " " +
                this.lastName + "</p>" + "<p>You are a " + this.year +
                " who is majoring in " + this.major + "</p>");
        }
    }
}
```

```
var newStudent = student("Sherlock", "Sassafrass", "IT", "freshman");
newStudent.info();
```

Review the following web page markup:

```
<form name="problemTicket" action="mailto:help@societyrugby.com" method="post">
    <input name="problemDescription" type="text"/>
    <input name="yourName" type="text"/>
    <input name="yourPhoneNumber" type="tel"/>
    <button>Create Problem Ticket</button>
</form>
```

The page allows users to create a problem ticket and send an email to `help@societyrugby.com`. The email contains a problem description, the user's name, and the user's phone number.

You need to perform custom validation of the user's phone number (`yourPhoneNumber`) when the page attempts to send the problem ticket (`problemTicket`).

Which property, method, or event of the form object should you use?

- A. `onclick`
- B. `setCustomValidity`
- C. `target`
- D. `onsubmit`

You need to determine whether the variable x is null.

What is the correct syntax?

- A. `x == null`
- B. `x typeof null`
- C. `x = null`
- D. `x == "null"`

You are creating a web page that dynamically creates input fields when a user clicks an Add button. Each input field must be numeric and specify Enter Score as its placeholder text.

You need to dynamically add an input field.

Complete the code by selecting the correct option from each drop-down list.

Note: You will receive partial credit for each correct selection.

#### Answer Area

```
<!DOCTYPE html>
<html>
<head>
    <script>
        function addScoreField()
        {
            var field = document. createElement ("input");
            field. setAttribute ("type", "number");
            field. setAttribute ("placeholder", "Enter Score");
            container. appendChild (field);
        }
    </script>
</head>
<body>
```

You are working on an application for a hotel. The application should display each type of room on a new line within a paragraph.

You create the following code. Line numbers are included for reference only.

```
01 <!DOCTYPE html>
02 <html>
03 <body id="body">
04 <p id="para"><br /></p>
05 <script>
06     var rooms = ["Single", "Double", "Triple", "Suite"];
07     var i = 0;
08     for (i=0;i<rooms.length;i++){
09
10    }
11 </script>
12 </body>
13 </html>
```

Which line of code should you use at line 09?

- A. `document.getElementById("para").innerHTML += rooms[i]+<br/>;`
- B. `document.getElementById("para").innerHTML = rooms[i]+<br/>;`
- C. `document.getElementById("para").innerHTML += rooms[i];`
- D. `document.getElementById("para").innerHTML += rooms[i]+<br/>;`

You need to use JavaScript to access the section1 element in the following code segment:

```
<div id='sectionA'>  
<div id='section1'>
```

Which method should you use?

- A. `getElementsByName`
- B. `getElementsByName`
- C. `getElementsByClassName`
- D. `getElementById`

You are designing a web page that displays a blue button. When the user clicks the button, the button should call a function that displays the message 'Welcome!'. When the user hovers over the button, the button should turn red. When the user points away from the button, the button should revert back to its original color blue.

You need to complete the markup by using the appropriate HTML events.

Complete the markup by selecting the correct option from each drop-down list.

Note: You will receive partial credit for each correct selection.

#### Answer Area

```
<!DOCTYPE html>
<html>
<head>
    <script>
        function showRed()
        {
            var changer = document.getElementById("changer");
            changer.style.backgroundColor = "red";
        }

        function showBlue()
        {
            var changer = document.getElementById("changer");
            changer.style.backgroundColor = "blue";
        }

        function notify()
```

You run the following code:

```
var chain = "";
var j;
for (j = 0; j < 8; j++) {
    if (j==2) { continue; }
    chain += j + " ";
}
```

What value is stored in the variable `chain` after the code runs?

- A. `0 1 3 4 5 6 7 8`
- B. `1 3 4 5 6 7 8`
- C. `0 1 3 4 5 6 7`
- D. `0 1`
- E. `3 4 5 6 7`

You are using JavaScript to create a calculator.

You create the following HTML. Line numbers are included for reference only.

```
01 <form id="calculator">
02   <input type="text" id="a" />
03   <input type="text" id="b" />
04   <input type="text" id="result" />
05   <input type="button" onclick="add()" value="+" />
06 </form>
```

You need to create a function named add() that adds the values in the a and b input elements and displays the result in the result input element.

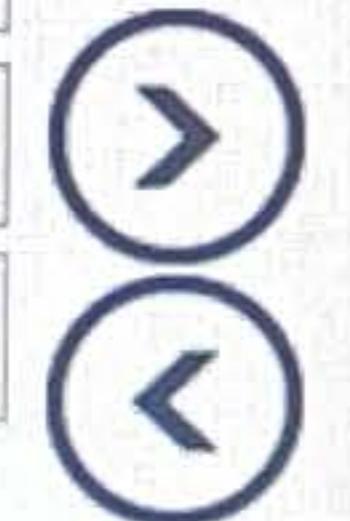
You define the following function in JavaScript:

#### Code Segments

```
var result = a + b;
var b = eval(document.getElementById("b"));
var a = eval(document.getElementById("a"));
var result = eval(document.getElementById("result"));
```

#### Answer Area

```
1 var a = eval(document.getElementById("a").value);
2 var b = eval(document.getElementById("b").value);
3 document.getElementById("result").value = a + b;
```



You are developing the following web page for rock music zone:

```
01<!doctype html>
02 <html>
03 <head>
04   <title>rock music zone</title>
05   <script>
06     var sales;
07     var totalsales=0;
08     var count=0;
09   </script>
10 </head>
11 <body>
12   <h2>rock music zone</h2>
13   <p id="sales"></p>
14   <script>
15     sales = math.round(prompt("enter today's sales (-1 to end): "));
16     while(sales!=-1){
17       totalsales += sales;
18       count++;
19       sales += math.round(prompt("enter today's sales (-1 to end): "));
20     }
21     document.getelementbyid("sales").innerHTML = "transactions=" + count + " t
22   </script>
23 </body>
24 </html>
```

The script is in an infinite loop.

What is the problem?

- A. In line 19, the sales variable should use the = operator instead of the += operator.
- B. In line 16, the condition should be changed to while(sales).
- C. In line 06, the sales variable is not initialized to 0.
- D. In line 17, the totalsales value will be undefined because sales is not a valid number.

You are using JavaScript to write a safe root Math utility.

Given the function `safeRoot(a, b)`, the function must perform the following tasks:

- If the radicand (`a`) is non-negative, return `Math.pow(a, 1 / b)`.
- If the radicand (`a`) is negative:
  - If the index (`b`) is divisible by 2, return the text `Result is an imaginary number`.
  - Otherwise, return `-Math.pow(-a, 1 / b)`.

Complete the code by selecting the correct option from each drop-down list.

Note: You will receive partial credit for each correct selection.

#### Answer Area

```
function safeRoot(a, b) {  
    if (a >= 0) {  
        return Math.pow(a, 1 / b);  
    } else {  
        } else if (b % 2 == 0) {  
            return "Result is an imaginary number";  
        } else {  
            return -Math.pow(-a, 1 / b);  
        }  
    }  
}
```

You are writing a JavaScript program for Sunset Airlines. The program stores various information about the airline's flights.

The program has initialized the following variables. Line numbers are included for reference only.

```
01 var flightDestination = "Denver";
02 var flight = 5;
03 var roundTrip = 2489.58;
04 var onTime = true;
05 var id = flight + flightDestination;
```

You need to determine the data types in the code segment based on initialization and the assignment of the variables.

Evaluate the code segment and answer the questions by selecting the correct option from each drop-down list.

Note: You will receive partial credit for each correct selection.



### Answer Area

What is the data type for line 01?

What is the data type for line 03?

What is the data type for line 04?

What is the data type for line 05?

You work for Society Rugby. You are finishing a script that calculates training heart rates.

The script must modify the following variables:

- Round the `rhr` (resting heart rate) up or down to the nearest integer.
- Round the `adjusted_low` heart rate down to the nearest integer.
- Round the `adjusted_high` heart rate up to the nearest integer.

Complete the code by selecting the correct option from each drop-down list.

Note: You will receive partial credit for each correct selection.

#### Answer Area

```
function heartRate() {  
    var age= parseInt(document.getElementById("age").value);  
    var rhr = parseInt(document.getElementById("restingHR").value);  
    rhr=Math.round(rhr);  
    var message;  
    var lowHR = (220-age-rhr)*.50;  
    var adjusted_low = Math.floor(lowHR + rhr);  
    var highHR = (220-age-rhr)*.85;  
    var adjusted_high = Math.ceil(highHR + rhr);  
    message="Your training heart rate is between:<br>"+adjusted_low+" and "+adjusted_high;  
    document.getElementById("feedback").innerHTML=message;  
}
```

You are creating a web page that tests a user's ability to accurately type text. The validation should be case-insensitive.

Complete the code by moving the appropriate code segments from the list on the left to the correct positions on the right. You may use each code segment once, more than once, or not at all.

Note: You will receive partial credit for each correct response.

**Code Segments****Answer Area**

```
<!DOCTYPE html>
<html>
<head>
<script>
    function validate() {
        var input = document.getElementById("tester");
        var text = document.getElementById("userText");
        if(input.  == text. ) {
            alert("Success");
        }
    }
</script>
</head>
```

Evaluate the following code. Line numbers are included for reference only.

```
01 var n = 50;  
02 var c = n + 5;  
03 var a = n % 2;  
04 var d = c / 11;  
05 n = d * 2;  
06 console.log(n, c, a, d);
```

What is the value of each variable at line 06?

Move the appropriate values from the list on the left to the correct variables on the right. You may use each value once, more than once, or not at all.

Note: You will receive partial credit for each correct response.

Values	Variables
<input type="checkbox"/> 0	n
<input type="checkbox"/> 1	c
<input type="checkbox"/> 5	a
<input type="checkbox"/> 10	d
<input type="checkbox"/> 25	
<input type="checkbox"/> 55	
<input type="checkbox"/> 100	
<input type="checkbox"/> 110	

You are writing a JavaScript application for an accounting system.

You create the following code. Line numbers are included for reference only.

```
01 <!DOCTYPE html>
02 <html>
03 <body>
04 <p id="info"></p>
05 <script>
06 var firstName = "Dusty";
07 var lastName = "Luna";
08 var fullName = firstName + " " + lastName;
09 var fullNameSalary=fullName + " " + salary;
10 document.getElementById("info").innerHTML = fullNameSalary;
11 var salary = 48000;
12 </script>
13 </body>
14 </html>
```

What is displayed in the `info` element?

- A. "Dusty Luna undefined"
- B. ""
- C. "Dusty Luna 48000"
- D. undefined

A JavaScript array is initialized as follows:

```
var array = [20, 40, 60, 80];
```

You write the following code to manipulate the array:

```
array.shift();
array.pop();
array.push(10);
array.unshift(100);
```

You need to determine the contents of the array after the code runs.

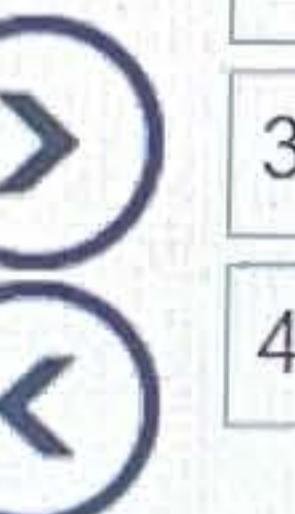
Which four elements does the array contain in sequence? Move the four elements to the answer area and place them in the correct order.

Elements

20
80

Answer area

1	100
2	40
3	60
4	10



You are creating a JavaScript program for an accounting system.

You write the following code. Line numbers are included for reference only.

```
01 function canWithdraw(amount, currentBalance) {  
02     return true;  
03 }  
04 else {  
05     return false;  
06 }  
07 }  
08 }
```

You need to ensure that the function returns `true` only if the `amount` is equal to or less than the `currentBalance`.

How should you complete the code at line 02?

- A. `if (amount < currentBalance) {`
- B. `if (amount >= currentBalance) {`
- C. `if (amount <= currentBalance) {`
- D. `if (amount > currentBalance) {`

You are using JavaScript to create a function that calculates admission price (`ticketPrice`).

The function must accept the age of the customer (`age`) as a parameter and implement the following rules:

- Customers who are younger than 5 years old get in free.
- Customers who are 65 years old or older get in free.
- Customers who are from 5 to 17 years old pay \$10.
- All other customers pay a price of \$20.

Complete the code by selecting the correct option from each drop-down list.

Note: You will receive partial credit for each correct selection.

#### Answer Area

```
function ticketPrice(age) {  
    var price = 20;  
    if (age < 5 && age >= 65) {  }  
        price = 0;  
    }  
    if (age >= 5 && age < 18) {  }  
        price = 10;  
    }  
    return price;  
}
```

Analyze the following code. Line numbers are included for reference only.

```
01 "use strict";
02 var val1 = 25;
03 var val2 = 4;
04 function multiply() {
05     return val1 * val2;
06 }
07
08 console.log("Global multiply returns() : " + multiply());
09 multiply();
10
11 function getProduct() {
12     var val1 = 2;
```

Answer Area

True      False



The call to the `multiply` function on line 09 returns 100.



The call to the `multiply` function on line 19 returns 100.

Several HTML pages need to reference the same JavaScript code.

Where should the JavaScript code live?

- A. In a .css file
- B. Within the body tags of each document
- C. In a .js file
- D. Within the head tags of each document

You are writing a JavaScript function for a scientific research company. The `setTotal` function counts the total number of scientists allocated to all projects. The `projects` array contains the number of scientists assigned to each project.

Complete the code by selecting the correct option from each drop-down list.

Note: You will receive partial credit for each correct selection.

### Answer Area

```
var projects = [3, 5, 6, 7];
var i = 0;
var totalAllocated = 0;
var count = projects.length;
function setTotal() {
    while (i < count) {
        totalAllocated += projects[i];
        i++;
    }
}
```

Which JavaScript code fragment will store only the number 42 in the variable `iNum` as a number?

- A. `var iNum = "42fred";`
- B. `var iNum = "42fred";  
iNum = iNum.substr(1,2);`
- C. `var iNum = parseInt("42fred");`
- D. `var iNum = "42fred";  
iNum = iNum.substr(2,2);`

Which JavaScript code fragment will store only the number 42 in the variable `iNum` as a number?

- A. `var iNum = "42fred";`
- B. `var iNum = "42fred";  
iNum = iNum.substr(1,2);`
- C. `var iNum = parseInt("42fred");`
- D. `var iNum = "42fred";  
iNum = iNum.substr(2,2);`

## Question 31 of 40

You are writing a program that includes an `update()` function. The function must update a paragraph element with input from the user and then hide the input box.

You write the following code. Line numbers are included for reference only.

```
01 <html>
02 <body>
03 <p id="para">Enter your name</p>
04 <input type="text" id="box" onchange="update()" value="">
05 <script>
06 var output = document.getElementById("para");
07 var input = document.getElementById("box");
08 function update() {
09
10
11 }
12 </script>
13 </body>
14 </html>
```

Which code should you use at lines 09 and 10?

- A. 09 `output.innerHTML = input.value;`  
10 `input.hidden = true;`
- B. 09 `output.innerHTML =`  
`input.innerHTML;`  
10 `input.style.visibility = false;`
- C. 09 `output = input;`  
10 `input.hidden = true;`
- D. 09 `output.value = input.innerHTML;`  
10 `output.hidden = true;`

You are writing JavaScript code that manipulates dates.

You need to initialize a Date object with the date January 1, 2021 by using the year, month, and date parameters.

Complete the code by selecting the correct option from each drop-down list.

Note: You will receive partial credit for each correct selection.

Answer Area

```
var date = new Date(  ,  ,  );
```

You are writing a script that processes overtime for hourly workers. The script must implement the following rules:

- If the pay\_type is h or H and the number of hours is greater than 40, the employee receives overtime pay.
- Otherwise, the employee receives their regular pay.

Complete the code by selecting the correct option from each drop-down list.

Note: You will receive partial credit for each correct selection.

#### Answer Area

```
document.getElementById("submit").addEventListener("click",function(){
    if ((pay_type == "h" || pay_type == "H") && hours > 40)
        overtime(hours);
    else
        regular(hours);
});
```

You are using JavaScript to develop a Tic-Tac-Toe program. You write the following code:

```
var grid = new Array();
grid[0] = ['-','-', 'X'];
grid[1] = ['-','-', '-'];
grid[2] = ['-','O', '-'];
```

Evaluate the code segment and answer the questions by selecting the correct option from each drop-down list.

Note: You will receive partial credit for each correct selection.



#### Answer Area

Which array element contains the "X"?

Which array element contains the "O"?

Your instructor has the following exception handling requirements:

- The `displayInfo()` function must use exception handling.
- The `display()` function must always run, regardless of whether an exception occurs.
- If there is an exception, the script must call the `logDisplayInfoError()` and `correctDisplayInfo()` functions.

You need to implement exception handling to meet your instructor's requirements.

Complete the code by selecting the correct option from each drop-down list.

Note: You will receive partial credit for each correct selection.

#### Answer Area

```
try{  
    displayInfo();  
}  
catch(msg){  
    logDisplayInfoError();  
    correctDisplayInfo();  
}  
finally{  
    display();  
}
```

You are creating a calendar application. You need to ensure that the code works correctly for all months of the year.

Complete the code by selecting the correct option from each drop-down list.

Note: You will receive partial credit for each correct selection.

### Answer Area

```
var daysInMonth;
var month;
month = new Date().getMonth();
switch (month) {
    case 1:
        daysInMonth = 28; // for February, ignore leap years
        break;
    case 3:
    case 5:
    case 8:
    case 10:
        daysInMonth = 30;
        break;
    default:
        daysInMonth = 31;
}
```

You are writing a JavaScript program for the phone company.

You need to change a paragraph element to "Can place a call" when the user moves the mouse inside the paragraph.

Complete the code by selecting the correct option from each drop-down list.



#### Answer Area

```
<html>
<body>
    <p id = "para" onmouseover = "hover('Can')" onmouseout = "hover('Cannot')">Cannot place a call</p>
    <script>
        function hover(canCall) {
            document.getElementById("para").innerHTML = canCall + " place a call.";
        }
    </script>
</body>
</html>
```

You are writing a JavaScript program for the phone company.

You need to change a paragraph element to "Can place a call" when the user moves the mouse inside the paragraph.

Complete the code by selecting the correct option from each drop-down list.



### Answer Area

```
<html>
<body>
    <p id = "para" onmouseover = "hover('Can')"  
        onmouseout = "hover('Cannot')>Cannot place a call</p>
    <script>
        function hover(canCall) {
            document.getElementById("para").innerHTML = canCall + " place a call.";
        }
    </script>
</body>
</html>
```

For each statement, select True or False.

Note: You will receive partial credit for each correct selection.

Answer Area



True	False
------	-------

The `alert()` method displays a popup box with Yes and No buttons.

<input type="radio"/>	<input checked="" type="radio"/>
-----------------------	----------------------------------

The `window.prompt()` method can be written without referencing the `window` object.

<input checked="" type="radio"/>	<input type="radio"/>
----------------------------------	-----------------------

The `window.document.getElementById(elementName)` method returns the element that has the `name` attribute with the value specified in the `elementName` parameter.

<input type="radio"/>	<input checked="" type="radio"/>
-----------------------	----------------------------------

You need to determine whether a string named str is empty.

What is the correct syntax?

- A. str == "null"
- B. str == null
- C. str == "empty"
- D. str == ""

A web page displays the following image element:

```

```

When the user hovers over the image element, the page should call a `displayText` function. You are writing the code to call the function.

Which code segment should you use?

- A. `document.getElementById("cottage").addEventListener("mouseover",displayText);`
- B. `document.getElementById("cottage").addEventListener("mouseover",displayText());`
- C. `document.getElementById("cottage").addEventListener("onmouseover",displayText);`
- D. `document.getElementById("cottage").onmouseover=displayText();`