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**70-480**

**Programming in HTML5 with JavaScript and CSS3**

**Version 10.0**

## Topic 1, Volume A

### QUESTION 1

You are validating user input by using JavaScript and regular expressions.

A group of predefined regular expressions will validate two input fields:

- An email address in a function named validateEmail (for example, firstname@contoso.com)
- A nine-digit number that allows optional hyphens after the second and fifth character in a function named validateSSN(for example, 555555555 or 555-55-5555)

You need to use the correct expression to validate the input.

Which expression should you insert into each function? (To answer, drag the appropriate regular expression statement to the correct location. Each regular expression statement may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

**Select and Place:**

```
/^\d{1,2}(\-|\/|\.)\d{1,2}\1\d{4}$/;
```

```
/^[0-9]{3}\^[0-9]{2}\^[0-9]{4}$/;
```

```
/^[0-9]{0}\^[0-9]{2}\^[0-9]{4}$/;
```

```
/^[a-zA-Z0-9._-]+@[a-zA-Z0-9.-]+\.[a-zA-Z]{2,4}$/;
```

```
/^[0-9]{3}+@[a-zA-Z0-9.-]+\.[0-9]{2,4}$/;
```

#### Answer Area

```
function validateSSN(userinput) {  
    var ssnPattern =  
          
    return ssnPattern.test(userinput);  
}  
  
function validateEmail(userinput){  
    var emailPattern =  
          
    return emailPattern.test(userinput);  
}
```

**Correct Answer:**

```
/^\d{1,2}(\-|\/|\.)\d{1,2}\1\d{4}$/;
```

```
/^[0-9]{0}\^[0-9]{2}\^[0-9]{4}$/;
```

```
/^[0-9]{3}+@[a-zA-Z0-9.-]+\.[0-9]{2,4}$/;
```

#### Answer Area

```
function validateSSN(userinput) {  
    var ssnPattern =  
        /^[0-9]{3}\^[0-9]{2}\^[0-9]{4}$/;  
  
    return ssnPattern.test(userinput);  
}
```

```
function validateEmail(userinput){  
    var emailPattern =  
        /^[a-zA-Z0-9._-]+@[a-zA-Z0-9.-]+\.[a-zA-Z]{2,4}$/;  
  
    return emailPattern.test(userinput);  
}
```

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 2**

You are developing a customer web form that includes the following HTML.

```
<input id="txtValue" type="text" />
```

A customer must enter a valid age in the text box prior to submitting the form.

You need to add validation to the control.

Which code segment should you use?

- ☐ A. 

```
function validate() {  
    var value = $("#txtValue").text();  
    var regex = /^[\\d\\,\\.]*$/;  
    if (!regex.test(value) || name == "")  
        alert("please enter valid value");  
    return;  
}
```
- ☐ B. 

```
function validate() {  
    var name = $("#txtValue").val();  
    if (name == null || name == "")  
        alert("please enter valid value");  
    return;  
}
```
- ☐ C. 

```
function validate() {  
    var name = $("#txtValue").text();  
    if (name == null || name == "")  
        alert("please enter valid value");  
    return;  
}
```
- ☐ D. 

```
function validate() {  
    var value = $("#txtValue").val();  
    var regex = /^[\\d\\,\\.]*$/;  
    if (!regex.test(value) || value == "")  
        alert("please enter valid value");  
    return;  
}  
  
return emailPattern.test(userinput);  
}
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

.val

Return value

A string containing the value of the element, or an array of strings if the element can have multiple values

### QUESTION 3

You are developing a customer contact form that will be displayed on a page of a company's website. The page collects information about the customer.

If a customer enters a value before submitting the form, it must be a valid email address.

You need to ensure that the data validation requirement is met.

What should you use?

- A. `<input name="email" type="url"/>`
- B. `<input name="email" type="text" required="required"/>`
- C. `<input name="email" type="text"/>`
- D. `<input name="email" type="email"/>`

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Example:

```
<form>
```

```
  E-mail:
```

```
    <input type="email" name="email">
```

```
</form>
```

Reference:



[http://www.w3schools.com/html/html5\\_form\\_input\\_types.asp](http://www.w3schools.com/html/html5_form_input_types.asp)

#### **QUESTION 4**

You are developing a form that captures a user's email address by using HTML5 and jQuery.

The form must capture the email address and return it as a query string parameter. The query string parameter must display the @ symbol that is used in the email address.

You need to implement this functionality.

How should you develop the form? (To answer, drag the appropriate code segment to the correct target or targets in the answer area. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

**Select and Place:**

```
str = $("form").serialize();
```

```
str = decodeURIComponent(str);
```

```
str = $("form").contents.toString();
```

```
str = $("form").toLocaleString();
```

```
str = decodeURI(str);
```

```
<!DOCTYPE html>
<html>
<head>
  <script src="http://code.jquery.com/jquery-latest.js"></script>
</head>
<body>
  <form>
    <input type="text" name="email" />
    <input type="submit" value="Submit" />
  </form>
  <script>
    $("form").submit(function () {
      var str;
      
      return true;
    });
  </script>
</body>
</html>
```

Correct Answer:

```
str = $("form").contents.toString();
```

```
str = $("form").toLocaleString();
```

```
str = decodeURI(str);
```

```
<!DOCTYPE html>
<html>
<head>
  <script src="http://code.jquery.com/jquery-latest.js"></script>
</head>
<body>
  <form>
    <input type="text" name="email" />
    <input type="submit" value="Submit" />
  </form>
  <script>
    $("form").submit(function () {
      var str;
      str = $("form").serialize();
      str = decodeURIComponent(str);
      return true;
    });
  </script>
</body>
</html>
```

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

\* The `serialize()` method creates a URL encoded text string by serializing form values.

You can select one or more form elements (like input and/or text area), or the form element itself.

The serialized values can be used in the URL query string when making an AJAX request.

Example: `$("form").serialize();`

\* decodeURIComponent

The decodeURIComponent() function decodes a URI component.

Return Value: A String, representing the decoded URI

Incorrect:

Not decodeURI:

decodeURI is intended for use on the full URI.

decodeURIComponent is intended to be used on .. well .. URI components that is any part that lies between separators (; / ? : @ & = + \$ , #).

Reference: jQuery serialize() Method

[http://www.w3schools.com/jquery/ajax\\_serialize.asp](http://www.w3schools.com/jquery/ajax_serialize.asp)

[http://www.w3schools.com/jsref/jsref\\_encodeuri.asp](http://www.w3schools.com/jsref/jsref_encodeuri.asp)

### QUESTION 5

You are developing an application that consumes a Windows Communication Foundation (WCF) service.

The application interacts with the service by using the following code. (Line numbers are included for reference only.)

```
01 <script>
02     function getCountry(country) {
03         $.ajax({
04             type: "POST",
05             contentType: "application/json; charset=utf-8",
06             url: "http://contoso.com/Service.svc/GetCountry",
07             data: '{"Country":"' + country + '}',
08             dataType: "json",
09             success: OnSuccess,
10             error: OnError
11         });
12     }
13 }
14 function OnSuccess(data, status) {
15     ...
16 }
17 function OnError(request, status, error) {
18     ...
19 }
20 </script>
```

You need to authenticate to the WCF service.

What should you do?

- A. At line 11, add the following lines of code.  
    ,username: yourusername  
    ,password: yourpassword
- B. At line 11, add the following line of code.  
    ,credentials: prompt
- C. At line 06, replace the code with the following line of code.  
    url: "http://contoso.com/Service.svc/GetCountry?  
        Username=username&password=password",
- D. At line 11, add the following line of code. The username and password will be stored in an XML file.  
    ,credentials: credentials.xml

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

#### QUESTION 6

You are developing a web page that enables customers to upload documents to a web server. The page includes an HTML5 PROGRESS element named progressBar that displays information about the status of the upload.

The page includes the following code. (Line numbers are included for reference only.)

```
01 var xhr = new XMLHttpRequest();  
02 var progressBar = $("#progressBar");  
03  
04 function(e) {  
05     if (e.lengthComputable) {  
06         progressBar.value = (e.loaded / e.total) * 100;  
07         progressBar.textContent = progressBar.value;  
08     };
```

An event handler must be attached to the request object to update the PROGRESS element on the page.

You need to ensure that the status of the upload is displayed in the progress bar.

Which line of code should you insert at line 03?

- A. xhr.upload.onloadeddata =
- B. xhr.upload.onplaying =
- C. xhr.upload.onseeking =
- D. xhr.upload.onprogress =

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Example:

```
xhr.upload.onprogress = function(evt)
{
    if (evt.lengthComputable)
    {
        var percentComplete = parseInt((evt.loaded / evt.total) * 100);
        console.log("Upload: " + percentComplete + "% complete")
    }
};
```

Reference:

<http://stackoverflow.com/questions/3352555/xhr-upload-progress-is-100-from-the-start>

### QUESTION 7

You are developing a customer web form that includes the following HTML.

```
<label id="txtValue"X/label>
```

Information from the web form is submitted to a web service. The web service returns the following JSON object.

```
{
  "Confirmation": "1234",
  "FirstName": "John"
}
```

You need to display the Confirmation number from the JSON response in the txtValue label field.

Which JavaScript code segment should you use?

- A. \$("#txtValue").val = (JSONObject.Confirmation);
- B. \$("#txtValue").val (JSONObject.Confirmation);
- C. \$("#txtValue").text = (JSONObject.Confirmation);

D. `$("#txtValue").text (JSONObject.Confirmation);`

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Incorrect:

not A, not B: A label object has no value attribute.

Reference:

<http://api.jquery.com/text/>

### QUESTION 8

You are developing a web application that retrieves data from a web service. The data being retrieved is a custom binary datatype named bint. The data can also be represented in XML.

Two existing methods named `parseXml()` and `parseBint()` are defined on the page.

The application must:

- Retrieve and parse data from the web service using binary format if possible
- Retrieve and parse the data from the web service using XML when binary format is not possible

You need to develop the application to meet the requirements.

What should you do? (To answer, select the appropriate options from the drop-down lists in the answer area.)

**Hot Area:**



```
var request = $.ajax({  
    uri: '/',
```

```
if (request.getResponseHeader("Content-Type") == "application/bint")  
if (request.getResponseHeader("Content-Type") == "application/bint")  
if (type == "application/bint")  
if (request.mimeType == "application/bint")  
accepts: 'application/bint, text/xml',  
contentType: 'application/bint, text/xml',  
dataType: 'application/bint, text/xml',
```

```
dataFilter: function (data, type) {
```

```
if (request.getResponseHeader("Content-Type") == "application/bint")  
if (request.getResponseHeader("Content-Type") == "application/bint")  
if (type == "application/bint")  
if (request.mimeType == "application/bint")  
accepts: 'application/bint, text/xml',  
contentType: 'application/bint, text/xml',  
dataType: 'application/bint, text/xml',
```

```
    return parseBint(data);  
    else  
        return parseXml(data);  
},  
success: function (data) {  
    start(data);  
}  
});
```



Correct Answer:

```
var request = $.ajax({
  uri: '/',
```

if (request.getResponseHeader("Content-Type") == "application/bint")	▼
if (request.getResponseHeader("Content-Type") == "application/bint")	
if (type == "application/bint")	
if (request.mimeType == "application/bint")	
accepts: 'application/bint, text/xml',	
contentType: 'application/bint, text/xml',	
dataType: 'application/bint, text/xml',	

```
dataFilter: function (data, type) {
```

if (request.getResponseHeader("Content-Type") == "application/bint")	▼
if (request.getResponseHeader("Content-Type") == "application/bint")	
if (type == "application/bint")	
if (request.mimeType == "application/bint")	
accepts: 'application/bint, text/xml',	
contentType: 'application/bint, text/xml',	
dataType: 'application/bint, text/xml',	

```
    return parseBint(data);
  else
    return parseXml(data);
},
success: function (data) {
  start(data);
}
});
```

**Section: (none)**

**Explanation**

**Explanation/Reference:**

\* accepts : 'application/bint, text/xml'

accepts:'application/bin,text/xml' to accept only XML and binary content in HTML responses.

\* Use the following condition to check if the html response content is binary: If(request.getResponseHeader("Content-Type")==="application/bint")

```
* var request = $.ajax({
    uri:'/',
    accepts: 'application/bint, text/xml',
    datafilter: function(data,type){
        if(request.getResponseHeader("Content-Type")==="application/bint")
            return parseBint(data);
        else
            return parseXml();
    },
    success: function (data) {
        start(data);
    }
});
```

### QUESTION 9

You are developing a customer web form that includes the following HTML.

```
<input id = "txtValue" />
```

A customer must enter a value in the text box prior to submitting the form.

You need to add validation to the text box control.

Which HTML should you use?

- A. <input id="txtValue" type="text" required="required"/>
- B. <input id="txtValue" type="text" pattern="[A-Za-z]{3}" />
- C. <input id="txtValue" type="required" />
- D. <input id="txtValue" type="required" autocomplete="on" />

**Correct Answer: A**

**Section: (none)**

## Explanation

### Explanation/Reference:

Definition and Usage

The required attribute is a boolean attribute.

When present, it specifies that an input field must be filled out before submitting the form.

Example

An HTML form with a required input field:

```
<form action="demo_form.asp">  
  Username: <input type="text" name="usrname" required>  
  <input type="submit">  
</form>
```

Username: <input type="text" name="usrname" required>

Reference: HTML <input> required Attribute

[http://www.w3schools.com/tags/att\\_input\\_required.asp](http://www.w3schools.com/tags/att_input_required.asp)

### QUESTION 10

You are developing a web page for runners who register for a race. The page includes a slider control that allows users to enter their age.

You have the following requirements:

- All runners must enter their age.
- Applications must not be accepted from runners less than 18 years of age or greater than 90 years.
- The slider control must be set to the average age (37) of all registered runners when the page is first displayed.

You need to ensure that the slider control meets the requirements.

What should you do? (To answer, drag the appropriate word or number to the correct location in the answer area. Each word or number may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

### Select and Place:

- range
- slider
- 0
- 18
- 90
- 100
- 37
- avgAge()
- default
- value
- required
- optional

```
<input type=" "
      min=" " max=" "
      step="5" = " "
      />
```

Correct Answer:

slider

0

100

avgAge()

default

optional

```
<input type="range"
min="18" max="90"
step="5" value="37"
required />
```

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Box 1-3: The <input type="range"> is used for input fields that should contain a value within a range.

Example

```
<input type="range" name="points" min="0" max="10">
```

Box 4-5: Use the value attribute to set the default value

Box 6: Definition and Usage

The required attribute is a boolean attribute.

When present, it specifies that an input field must be filled out before submitting the form.

Example

Username: <input type="text" name="username" required>

Reference: HTML Input Types

[http://www.w3schools.com/html/html\\_form\\_input\\_types.asp](http://www.w3schools.com/html/html_form_input_types.asp)

### QUESTION 11

You are developing an HTML5 web application that displays the current temperature whenever a button is clicked. The following code provides this functionality.

```
function Loader() {  
    this.status = "ready";  
    this.temp = 50;  
    this.updateStatus = function (newStatus) {  
        status = newStatus;  
    };  
}  
  
var loader = new Loader();  
  
$(function () {  
    $("#loadTemp").click(function (eventData) {  
        loader.temp = loadTemp();  
        loader.updateStatus("done");  
    });  
});
```

When the temperature is loaded, the status property on the loader instance does not change.

You need to ensure that the status property on the loader instance is updated when the temperature is loaded.

Which code segment should you use to replace the Loader function?

- ☐ A. 

```
function Loader() {  
    this.status = "ready";  
    this.temp = 50;  
    this.updateStatus = function (newStatus) {  
        this.status = newStatus;  
    };  
}
```
- ☐ B. 

```
function Loader() {  
    this.prototype.status = "ready";  
    this.temp = 50;  
    this.updateStatus = function (newStatus) {  
        this.status = newStatus;  
    };  
}
```
- ☐ C. 

```
function Loader() {  
    status = "ready";  
    this.temp = 50;  
    this.updateStatus = function (newStatus) {  
        status = newStatus;  
    };  
}
```
- ☐ D. 

```
function Loader() {  
    window.status = "ready";  
    this.temp = 50;  
    this.updateStatus = function (newStatus) {  
        status = newStatus;  
    };  
}
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Incorrect:

not D: window.status property

The status property sets the text in the status bar at the bottom of the browser, or returns the previously set text.

### QUESTION 12

You are creating a class named Consultant that must inherit from the Employee class. The Consultant class must modify the inherited PayEmployee method. The Employee class is defined as follows.

```
function Employee() {}  
Employee.prototype.PayEmployee = function () {  
    alert('Hi there!');  
}
```

Future instances of Consultant must be created with the overridden method.

You need to write the code to implement the Consultant class.

Which code segments should you use? (Each correct answer presents part of the solution. Choose two.)

- A. 

```
Consultant.PayEmployee = function ()  
{  
    alert('Pay Consultant');  
}
```
- B. 

```
Consultant.prototype.PayEmployee = function ()  
{  
    alert('Pay Consultant');  
}
```
- C. 

```
function Consultant () {  
    Employee.call(this);  
}  
Consultant.prototype = new Employee();  
Consultant.prototype.constructor = Consultant;
```



```
D. function Consultant() {  
    Employee.call(this); }  
    Consultant.prototype.constructor = Consultant.create;
```

**Correct Answer:** BC

**Section:** (none)

**Explanation**

**Explanation/Reference:**

\* Object.prototype.constructor

Returns a reference to the Object function that created the instance's prototype. Note that the value of this property is a reference to the function itself, not a string containing the function's name. The value is only read-only for primitive values such as 1, true and "test".

\* The constructor property is created together with the function as a single property of func.prototype.

Reference: Object.prototype.constructor

### QUESTION 13

You are modifying an existing web page. The page is being optimized for accessibility. The current page contains the following HTML.

```
<ul>  
  <li><a href="">Home</a></li>  
  <li><a href="">Sales</a></li>  
  <li><a href="">Operations</a></li>  
</ul>
```

Standards-compliant screen readers must be able to identify the links contained within the navigation structure automatically.

You need to create the navigation link structure in the page.

With which container tags should you wrap the existing markup?

- A. <navmap> </navmap>
- B. <div id="nav"> </div>
- C. <nav> </nav>
- D. <map> </map>

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

HTML <nav> Tag  
Example

A set of navigation links:

```
<nav>
  <a href="/html/">HTML</a> |
  <a href="/css/">CSS</a> |
  <a href="/js/">JavaScript</a> |
  <a href="/jquery/">jQuery</a>
</nav>
```

Reference: HTML <nav> Tag  
[http://www.w3schools.com/tags/tag\\_nav.asp](http://www.w3schools.com/tags/tag_nav.asp)

**QUESTION 14**

You are developing an airline reservation website by using HTML5 and JavaScript. A page on the site allows users to enter departure and destination airport information and search for tickets.

You have the following requirements:

- Users must be able to save information in the application about their favorite destination airport.
- The airport information must be displayed in the destination text box whenever the user returns to the page.

You need to develop the site to meet the requirements.

Which lines of code should you use? (To answer, select the appropriate options from the drop-down lists in the answer area.)

**Hot Area:**

```
<body>
  <input id="txtDest" type="text" />
  <input type="button" value="Submit"
    onclick="storeDestination('txtDest')" />
  <script>
    showDestination();
    function showDestination() {

      var dest = localStorage.destination;

      var dest = localStorage.destination;
      localStorage.destination = dest;
      var dest = sessionStorage.destination;
      sessionStorage.destination = dest;

      if (dest != null)
        document.getElementById("txtDest").value = dest;
    }

    function storeDestination(id) {
      var dest = document.getElementById(id).value;

      var dest = localStorage.destination;

      var dest = localStorage.destination;
      localStorage.destination = dest;
      var dest = sessionStorage.destination;
      sessionStorage.destination = dest;

    }
  </script>
</body>
```

**Correct Answer:**

```

<body>
  <input id="txtDest" type="text" />
  <input type="button" value="Submit"
    onclick="storeDestination('txtDest')" />
  <script>
    showDestination();
    function showDestination() {

      var dest = localStorage.destination;

      var dest = localStorage.destination;
      localStorage.destination = dest;
      var dest = sessionStorage.destination;
      sessionStorage.destination = dest;

      if (dest != null)
        document.getElementById("txtDest").value = dest;
    }

    function storeDestination(id) {
      var dest = document.getElementById(id).value;

      var dest = localStorage.destination;

      var dest = localStorage.destination;
      localStorage.destination = dest;
      var dest = sessionStorage.destination;
      sessionStorage.destination = dest;

    }
  </script>
</body>

```

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

- \* retrieve localStorage.destination
- \* store localStorage.destination

**QUESTION 15**

You are developing an HTML5 web application for displaying encyclopedia entries.

Each encyclopedia entry has an associated image that is referred to in the entry.

You need to display the image by using the correct semantic markup.

What should you do? (To answer, select the appropriate options from the drop-down list in the answer area.)

**Hot Area:**



Image description

**Correct Answer:**



< >

title
figcaption
label
aside
figure
cite



< >

title
figcaption
label
aside
figure
cite

Image description

< />

title
figcaption
label
aside
figure
cite

/

title
figcaption
label
aside

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

The <figure> element

The <figure> element is intended to be used in conjunction with the <figcaption> element to mark up diagrams, illustrations, photos, and code examples (among other things).

Example:

<figure>



<figcaption>A cheeky macaque, Lower Kintaganban River, Borneo. Original by <a href="http://www.flickr.com/photos/rclark/">Richard Clark</a></figcaption>

</figure>

Reference: The figure & figcaption elements

#### **QUESTION 16**

You are creating a JavaScript object that represents a customer.

You need to extend the Customer object by adding the GetCommission() method.

You need to ensure that all future instances of the Customer object implement the GetCommission() method.

Which code segment should you use?

- ☐ A. `Customer.apply.GetCommission() = function()`  
    `{`  
        `alert('payroll');`  
    `}`
- ☐ B. `Customer.prototype.GetCommission() = function Customer.GetCommission() ()`  
    `{`  
        `alert('payroll');`  
    `}`
- ☐ C. `Customer.GetCommission() = function () {`  
    `alert('payroll');`  
    `}`
- ☐ D. `Customer.prototype.GetCommission() = function ()`  
    `{`  
        `alert('payroll');`  
    `}`

- A. Option A  
B. Option B  
C. Option C  
D. Option D

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

\* `Object.prototype.constructor`

Returns a reference to the Object function that created the instance's prototype. Note that the value of this property is a reference to the function itself, not a string containing the function's name. The value is only read-only for primitive values such as 1, true and "test".

\* The constructor property is created together with the function as a single property of `func.prototype`.

Reference: `Object.prototype.constructor`

**QUESTION 17**

You are developing a web form that includes the following code.

```
<div id="dynamicForm">  
  <input type="checkbox" id="myCheckbox" onclick="ShowInputBox('dynamicForm');" >  
</div>
```

When a user selects the check box, an input text box must be added to the page dynamically.

You need to ensure that the text box is added.

Which function should you use?

- ☐ A. 

```
function ShowInputBox(divName)
{
    var newInputDiv = document.createElement('div');
    newInputDiv.innerHTML = "<input type='text' id='newInputBox'>";
    document.getElementById(newInputDiv).appendChild(divName);
}
```
- ☐ B. 

```
function ShowInputBox(divName)
{
    var newInputDiv = document.createElement('div');
    newInputDiv.innerHTML = "<input type='text' id='newInputBox'>";
    document.getElementById(divName).appendChild(newInputDiv);
}
```
- ☐ C. 

```
function ShowInputBox(divName)
{
    var newInputDiv = document.createElement('div');
    newInputDiv.innerHTML = "<input type='text' id='newInputBox'>";
    document.getElementById(divName).applyElement (newInputDiv);
}
```
- ☐ D. 

```
function ShowInputBox(divName)
{
    var newInputDiv = document.createElement('div');
    newInputDiv.innerHTML = "<input type='text' id='newInputBox'>";
    document.getElementById(newInputDiv).applyElement (divName);
}
```

- A. Option A  
B. Option B  
C. Option C

D. Option D

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

We create a new div element with the textbox.

We then use `appendChild()` method appends this node as the last child the input node `divname`.

Reference: HTML DOM `appendChild()` Method

**QUESTION 18**

An HTML page has a canvas element.

You need to draw a red rectangle on the canvas element dynamically. The rectangle should resemble the following graphic.



How should you build the code segment? (To answer, select the appropriate options from the drop-down lists in the answer area.)

**Hot Area:**

```
<!DOCTYPE html>
<html>
<body>
  <canvas id="mycanvas" width="300" height="300"></canvas>
  <script type="text/javascript">
    context.fillRect(50, 50, 100, 100);
    context.fillRect(50, 50, 100, 100);
    context.fillStyle = "rgb(255, 0, 0)";
    var canvas = document.getElementById('mycanvas');
    var canvas = document.BeginPath();

    var context = canvas.getContext('2d');

    context.fillRect(50, 50, 100, 100);
    context.fillRect(50, 50, 100, 100);
    context.fillStyle = "rgb(255, 0, 0)";
    var canvas = document.getElementById('mycanvas');
    var canvas = document.BeginPath();

    context.fillRect(50, 50, 100, 100);
    context.fillRect(50, 50, 100, 100);
    context.fillStyle = "rgb(255, 0, 0)";
    var canvas = document.getElementById('mycanvas');
    var canvas = document.BeginPath();

  </script>
</body>
</html>
```

**Correct Answer:**



```
<!DOCTYPE html>
<html>
<body>
    <canvas id="mycanvas" width="300" height="300"></canvas>
    <script type="text/javascript">
        context.fillRect(50, 50, 100, 100);
        context.fillRect(50, 50, 100, 100);
        context.fillStyle = "rgb(255, 0, 0)";
        var canvas = document.getElementById('mycanvas');
        var canvas = document.BeginPath();

        var context = canvas.getContext('2d');

        context.fillRect(50, 50, 100, 100);
        context.fillRect(50, 50, 100, 100);
        context.fillStyle = "rgb(255, 0, 0)";
        var canvas = document.getElementById('mycanvas');
        var canvas = document.BeginPath();

        context.fillRect(50, 50, 100, 100);
        context.fillRect(50, 50, 100, 100);
        context.fillStyle = "rgb(255, 0, 0)";
        var canvas = document.getElementById('mycanvas');
        var canvas = document.BeginPath();

    </script>
</body>
</html>
```

**Section: (none)**

**Explanation**

**Explanation/Reference:**

\* getElementById

The getElementById() method accesses the first element with the specified id. We use it to get a reference to the canvas.

\* context.fillStyle.

Example:

Define a red fill-color for the rectangle:

JavaScript:

```
var c=document.getElementById("myCanvas");  
var ctx=c.getContext("2d");  
ctx.fillStyle="#FF0000";  
ctx.fillRect(20,20,150,100);
```

Reference: HTML canvas fillStyle Property

### **QUESTION 19**

You are developing an HTML5 page that has an element with an ID of logo. The page includes the following HTML.

```
<div>  
Logo:<br>  
<div id="logo">  
</div>  
</div>
```

You need to move the logo element lower on the page by five pixels.

Which lines of code should you use? (Each correct answer presents part of the solution. Choose two.)

- A. document.getElementById("logo").style.position = "relative";
- B. document.getElementById("logo").style.top = "5px";
- C. document.getElementById("logo").style.top = "-5px";
- D. document.getElementById("logo").style.position = "absolute";

**Correct Answer:** AB

**Section: (none)**

**Explanation**

**Explanation/Reference:**

\* style.position = "relative";

The element is positioned relative to its normal position, so "left:20" adds 20 pixels to the element's LEFT position.

\* For relatively positioned elements, the top property sets the top edge of an element to a unit above/below its normal position.

Example: Example

Set the top edge of the image to 5px below the top edge of its normal position:

```
img {  
  position: relative;  
  top: 5px;  
}
```

Reference: CSS position Property; CSS top Property

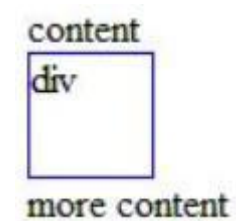
[http://www.w3schools.com/cssref/pr\\_class\\_position.asp](http://www.w3schools.com/cssref/pr_class_position.asp)

[http://www.w3schools.com/cssref/pr\\_pos\\_top.asp](http://www.w3schools.com/cssref/pr_pos_top.asp)

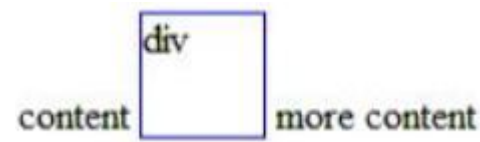
**QUESTION 20**

You are developing a web page by using HTML5 and C5S3. The page includes a <div> tag with the ID set to validate.

When the page is rendered, the contents of the <div> tag appear on a line separate from the content above and below it. The rendered page resembles the following graphic.



The page must be rendered so that the <div> tag is not forced to be separate from the other content. The following graphic shows the correctly rendered output.



You need to ensure that the page is rendered to meet the requirement.

Which line of code should you use?

- A. `document.getElementById("validate").style.display = "inline";`
- B. `document.getElementById("validate").style.margin = "0";`
- C. `document.getElementById("validate").style.padding = "0";`
- D. `document.getElementById("validate").style.display = "block";`

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

\* display: value;

value: inline

Default value. Displays an element as an inline element (like <span>)

\* Example

Display <p> elements as inline elements:

```
p.inline {  
    display: inline;  
}
```

Reference: CSS display Property

[http://www.w3schools.com/cssref/pr\\_class\\_display.asp](http://www.w3schools.com/cssref/pr_class_display.asp)

## QUESTION 21

You are creating a web worker for an HTML5 application.

The following tasks must be performed from within the web worker:

- Register an event listener for the web worker
- Start and stop the web worker

You need to define a function that performs the required tasks.

Which code segment should you use? (To answer, select the appropriate option from the drop-down list in the answer area.)

**Hot Area:**

```
self.postMessage('Worker: ' + data);
```

```
self.postMessage('Worker: ' + data);
```

```
self.addEventListener('message', function(event));
```

```
self.attachEvent('Worker', data);
```

```
self.terminate();
```

```
self.close();
```

```
var data = event.data;
```

```
switch (data.cmd) {
```

```
case 'start':
```

```
self.postMessage('Worker: ' + data);
```

```
self.postMessage('Worker: ' + data);
```

```
self.addEventListener('message', function(event));
```

```
self.attachEvent('Worker', data);
```

```
self.terminate();
```

```
self.close();
```

```
break;
```

```
case 'stop':
```

```
self.postMessage('Worker: ' + data);
```

```
self.postMessage('Worker: ' + data);
```

```
self.addEventListener('message', function(event));
```

```
self.attachEvent('Worker', data);
```

```
self.terminate();
```

```
self.close();
```

```
break;
```

```
default:
```

```
self.postMessage('Try again: ' + data.msg);
```

```
default:
```

```
self.postMessage('Try again: ' + data.msg);
```

```
};
```

**Correct Answer:**

```
self.postMessage('Worker: ' + data);
```

```
self.postMessage('Worker: ' + data);
```

```
self.addEventListener('message', function(event));
```

```
self.attachEvent('Worker', data);
```

```
self.terminate();
```

```
self.close();
```

```
var data = event.data;
```

```
switch (data.cmd) {
```

```
case 'start':
```

```
self.postMessage('Worker: ' + data);
```

```
self.postMessage('Worker: ' + data);
```

```
self.addEventListener('message', function(event));
```

```
self.attachEvent('Worker', data);
```

```
self.terminate();
```

```
self.close();
```

```
break;
```

```
case 'stop':
```

```
self.postMessage('Worker: ' + data);
```

```
self.postMessage('Worker: ' + data);
```

```
self.addEventListener('message', function(event));
```

```
self.attachEvent('Worker', data);
```

```
self.terminate();
```

```
self.close();
```

```
break;
```

```
default:
```

```
self.postMessage('Try again: ' + data.msg);
```

```
default:
```

```
self.postMessage('Try again: ' + data.msg);
```

```
};
```



**Section: (none)**

**Explanation**

**Explanation/Reference:**

\* addEventListener

The addEventListener() method attaches an event handler to the specified element.

In context of a worker, both self and this refer to the global scope. The worker can either add an event listener for the message event, or it can define the onmessage handler to listen for any messages sent by the parent thread.

\* postmessage

Pass a message to the worker.

\* close()

Terminating Workers

Workers are resource-intensive; they are OS-level threads. Therefore, you do not want to create a large number of worker threads, and you should terminate the web worker after it completes its work. Workers can terminate themselves, like this:

```
self.close();
```

Reference: HTML DOM addEventListener() Method; The Basics of Web Workers

## **QUESTION 22**

You are creating a JavaScript function that displays the name of a web application.

You declare the following button element.

```
<input type="button" id= "About" value="About" />
```

When a user clicks the button, a JavaScript function named About must be called.

You need to create an event handler that calls the About function when the button is clicked.

Which two code segments can you use? (Each correct answer presents a complete solution. Choose two.)



- ☐ A. `var button = document.getElementById("About");  
ScriptEngine.call(button, About());`
- ☐ B. `var button = document.getElementById("About");  
ScriptEngine.bind(button, About());`
- ☐ C. `var button = document.getElementById("About");  
button.addEventListener("click", About);`
- ☐ D. `var button = document.getElementById("About");  
button.attachEvent("onclick", About);`

- A. Option A  
B. Option B  
C. Option C  
D. Option D

**Correct Answer:** CD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

C: `addEventListener`

The `addEventListener()` method attaches an event handler to the specified element.

In context of a worker, both `self` and `this` refer to the global scope. The worker can either add an event listener for the message event, or it can define the onmessage handler to listen for any messages sent by the parent thread.

D: `attachEvent` method

Registers an event handler function (event listener) for the specified event on the current object.

Reference: `addEventListener` method; `attachEvent` method

<http://help.dottoro.com/ljeuqqoq.php>

<http://help.dottoro.com/ljinxrmt.php>

## QUESTION 23

You are creating a function by using JavaScript. The function accepts an object as the parameter and returns a string that identifies the data type of the object.

You have the following requirements:

- The function must return "Number" if the object is a number.
- The function must return "String" if the object is a string.
- The function must return "Unknown" if the object is neither a number nor a string.

You need to implement the function to meet the requirements.

How should you build the code segment? (To answer, select the appropriate options from the drop-down lists in the answer area.)

**Hot Area:**

```
function GetObjectType(obj) {
```

```
    default (obj.constructor) {
```

default  
switch  
break  
case

```
    default Number:
```

default  
switch  
break  
case

```
        return "Number";
```

default ;  
default  
switch  
break  
case

```
    default String:
```

default  
switch  
break  
case

```
        return "String";
```

default ;  
default  
switch  
break  
case

**Correct Answer:**

```
function GetObjectType(obj) {
```

```
    default (obj.constructor) {
```

default  
switch  
break  
case

```
    default Number:
```

default  
switch  
break  
case

```
        return "Number";
```

default ;  
default  
switch  
break  
case

```
    default String:
```

default  
switch  
break  
case

```
        return "String";
```

default ;  
default  
switch  
break  
case

**Section: (none)**

**Explanation**

**Explanation/Reference:**

\* Use the switch statement to select one of many blocks of code to be executed.

Syntax

```
switch(expression) {  
  case n:  
    code block  
    break;  
  case n:  
    code block  
    break;  
  default:  
    default code block  
}
```

This is how it works:

The switch expression is evaluated once.

The value of the expression is compared with the values of each case.

If there is a match, the associated block of code is executed.

\* `Object.prototype.constructor`

Returns a reference to the `Object` function that created the instance's prototype. Note that the value of this property is a reference to the function itself, not a string containing the function's name. The value is only read-only for primitive values such as 1, true and "test".

\* Description

All objects inherit a `constructor` property from their prototype:

```
var o = {};  
o.constructor === Object; // true
```

```
var a = [];  
a.constructor === Array; // true
```

```
var n = new Number(3);  
n.constructor === Number; // true
```

\* The `constructor` property is created together with the function as a single property of `func.prototype`.

Reference: JavaScript Switch Statement; `Object.prototype.constructor`

**QUESTION 24**

You need to test the value of the following variable in JavaScript.

```
var length = "75";
```

A block of code must execute if the length equals 75 regardless of the data type.

You need to use the statement that meets this requirement.

Which lines of code should you use? (Each correct answer presents a complete solution. Choose two.)

- A. if (length == 75)
- B. if (length == "75")
- C. if (length != 75)
- D. if (length != "75")

**Correct Answer:** BD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

When comparison is made using double-equals operator (==), it will check the values of variable and convert them to a common type and returns true if both are equals. So comparing number with string having the same value will return true.

Examples:  
examples:

```
1
console.log(23 == "23"); // true
2
console.log(1 == true); // true
```

Incorrect:

not ===: This is "strict" or "identical" equality.

Reference: JavaScript Triple Equals Operator vs Double Equals Operator ( === vs == )

### QUESTION 25

You are developing an application that uses a third-party JavaScript library named doWork().

The library occasionally throws an "object is null or undefined" error with an error code of -2146823281.

The application must:

- Extract and handle the exceptions thrown by doWork()
- Continue normal program execution if other exceptions occur

You need to implement the requirements.

Which code segment should you use?

☐ A. 

```
if (doWork() == -2146823281) {  
    ...  
}
```

☐ B. 

```
if (doWork() == "object is null or undefined") {  
    ...  
}
```

☐ C. 

```
try {  
    doWork();  
} catch(e) {  
    if (e.number == -2146823281)  
        ...  
}
```

☐ D. 

```
try {  
    doWork();  
} catch(e) {  
    if (e.message == -2146823281)  
        ...  
}
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D



**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

\* The try statement lets you test a block of code for errors.  
The catch statement lets you handle the error.

The JavaScript statements try and catch come in pairs:

```
try {  
    Block of code to try  
}  
catch(err) {  
    Block of code to handle errors  
}
```

\* object.number [= errorNumber]

Returns or sets the numeric value associated with a specific error. The Error object's default property is number.

\* Example:

The following example causes an exception to be thrown and displays the error code that is derived from the error number.

```
try  
{  
    // Cause an error.  
    var x = y;  
}  
catch(e)  
{  
    document.write ("Error Code: ");  
    document.write (e.number & 0xFFFF)  
    document.write ("<br />");  
  
    document.write ("Facility Code: ")  
    document.write(e.number>>16 & 0x1FFF)  
    document.write ("<br />");  
  
    document.write ("Error Message: ")  
    document.write (e.message)  
}
```

The output of this code is as follows.

Error Code: 5009  
Facility Code: 10  
Error Message: 'y' is undefined

Reference: JavaScript Errors - Throw and Try to Catch; number Property (Error) (JavaScript)

### QUESTION 26

You are troubleshooting a web page that includes the following code. (Line numbers are included for reference only.)

```
01 <!DOCTYPE html>
02 <html lang="en" xmlns="http://www.w3.org/1999/xhtml">
03 <head>
04   <meta charset="utf-8" />
05   <title></title>
06   <script>
07     document.addEventListener("DOMContentLoaded", function () {
08       var elButton = document.getElementById("myButton");
09       var elDiv = document.getElementById("myDiv");
10       elButton.addEventListener("click", function () {
11         alert(this.type);
12       }, false);
13     }, false);
14   </script>
15 </head>
16 <body>
17   <div id="myDiv">Test</div>
18   <input type="button" id="myButton" value="Click Me" />
19 </body>
20 </html>
```

What is displayed in the alert from line 11?

- A. Div
- B. Function
- C. Button
- D. Document

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

\* The event handler here normalizes event object (passed as a first argument) and invokes handleCellClick in a proper context (i.e. referring to an element that was attached event listener to). The element is the button elButton.

\* addEventListener

Syntax: element.addEventListener(event, function, useCapture)

Reference: HTML DOM addEventListener() Method

### QUESTION 27

You are developing a web application that consumes services from a third-party application. A web worker processes the third-party application requests in the background. A page in the application instantiates the web worker process.

You need to establish two-way communications between the web worker process and the page.

Which two actions will achieve this goal? (Each correct answer presents a complete solution. Choose two.)

- A. From the web worker, use the onconnect event handler of the main page to capture events.
- B. From the main page, use the onmessage event handler of the web worker to capture events.
- C. From the web worker, use the onmessage event handler of the main page to capture events.
- D. From the main page, use the onconnect event handler of the web worker to capture events.

**Correct Answer:** BC

**Section:** (none)

**Explanation**

**Explanation/Reference:**

\* When postMessage() is called from the main page, our worker handles that message by defining an onmessage handler for the message event.

\* Server-Sent Events - One Way Messaging

A server-sent event is when a web page automatically gets updates from a server.

Receive Server-Sent Event Notifications

The EventSource object is used to receive server-sent event notifications:

Example

```
var source = new EventSource("demo_sse.php");
```

```
source.onmessage = function(event) {  
    document.getElementById("result").innerHTML += event.data + "<br>";  
};
```

Reference:

[http://www.w3schools.com/html/html5\\_serversentevents.asp](http://www.w3schools.com/html/html5_serversentevents.asp)

<http://www.html5rocks.com/en/tutorials/workers/basics/>

### QUESTION 28

You are developing an HTML5 web application that displays customer mailing address information.

The application loads addresses from a web service by using AJAX. The following code defines a Customer object and loads address data.

```
function Customer(firstName, lastName) {  
    this.firstName = firstName;  
    this.lastName = lastName;  
    this.address = "";  
}  
  
Customer.prototype.parseAddress = function (data) {  
    this.address = data.address;  
}  
  
Customer.prototype.loadAddress = function () {  
  
}
```

You need to implement the loadAddress function.

Which code segment should you use?

- ☐ A. `$.get('data.xml', function (data) {  
 (function (scope) {  
 scope.parseAddress(data);  
 })(data);  
});`
- ☐ B. `$.get('data.xml', function (data, innerScope) {  
 innerScope.parseAddress(data);  
});`
- ☐ C. `var that = this;  
$.get('data.xml', function (data) {  
 that.parseAddress(data);  
});`
- ☐ D. `$.get('data.xml', function (data) {  
 this.parseAddress(data);  
});`

- A. Option A  
B. Option B  
C. Option C  
D. Option D

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 29

You are developing an HTML5 web page.

The appearance of the text box must change when a user moves the focus to another element on the page.

You need to develop the page to respond to user action.

Which line of code should you use?

- A. `<input type="text" onblur="resetStyle(this);" />`
- B. `<input type="text" onfocus="resetStyle(this);" />`
- C. `<input type="text" onreset="resetStyle(this);" />`
- D. `<input type="text" onselect="resetStyle(this);" />`

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Definition and Usage

The onblur event occurs when an object loses focus.

Example

Execute a JavaScript when a user leaves an input field:

```
<input type="text" onblur="myFunction()">
```

Reference: onblur Event

[http://www.w3schools.com/jsref/event\\_onblur.asp](http://www.w3schools.com/jsref/event_onblur.asp)

### QUESTION 30

You are developing an online shopping application that accepts credit cards for payment.

If the credit card number is invalid, the application must:

- Generate an error
- Assign "200" to the error number
- Assign "Invalid" to the error description

You need to write the code that meets the requirements.

How should you write the code? (To answer, drag the appropriate code segment or segments to the correct location in the answer area. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

**Select and Place:**

throw    new    (    ,    );

"Invalid"

200

Error

break

Correct Answer:

throw    new    Error    (    200    ,    "Invalid"    );

break

Section: (none)  
Explanation

Explanation/Reference:

Example: throw new Error(200, "x equals zero");

Reference: throw Statement (JavaScript)

### QUESTION 31

You are developing an HTML5 page that includes several paragraph elements.

You have the following requirements:

- Add a drop shadow that is one inch below the text in the paragraph
- Set the radius of the drop shadow to five pixels

You need to style the paragraphs to meet the requirements.

Which CSS style should you use?

- A. text-shadow: 72pt 0pt 5pt
- B. text-shadow: 5px 1in 0px;
- C. text-shadow: 72pt 5em 0px
- D. text-shadow: 72pt 0em 5px;

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

D is the most correct.

Reference: CSS Text Module Level 3

<http://www.w3.org/TR/css3-text/#text-shadow>

Note:

All options are incorrect nearest correct answers are B or D.

#obj {text-shadow: <x-offset> <y-offset> <blur-radius> <color>; }

<x-offset> +n right -n left

<y-offset> +n bottom -n top

1 inch below means <y-offset> is 1in or 72 pt

Hence actually answer must be

0px, 1in, 5px

or

0px, 72pt, 5px

### QUESTION 32



You are creating a web form that users will use to enter their personal information. The form includes the following HTML.

```
<body>
  <table>
    <tr>
      <td>Item</td>
      <td>Input</td>
      <td>Current</td>
    </tr>
    <tr>
      <td>First Name</td>
      <td>
        <input type="text" />
      </td>
      <td></td>
    </tr>
    <tr>
      <td>Last Name</td>
      <td>
        <input type="text" />
      </td>
      <td></td>
    </tr>
  </table>
</body>
```

You have the following requirements:

- When a user enters an input box, the cell on the right must turn green.
- When a user leaves an input box, the cell on the right must turn white.

You need to create the web form to meet these requirements.

Which code segment should you use?

nth-child

☐ A. 

```
$(document).ready(function () {  
    $('table td: nth-child(2) input').focus(  
        function () {  
            $(this).parent().next().css  
                ("background-color", "#00FF00");  
        });  
    $('table td: nth-child(2) input').blur(  
        function () {  
            $(this).parent().next().css  
                ("background-color", "#FFFFFF");  
        });  
});
```

☐ B. 

```
$(document).ready(function () {  
    $('table td: eq(2) input').focus(  
        function () {  
            $(this).parent().parent().next().css  
                ("background-color", "#00FF00");  
        });  
    $('table td: eq(2) input').blur(  
        function () {  
            $(this).parent().parent().next().css  
                ("background-color", "#FFFFFF");  
        });  
});
```

☐ C. 

```
$(document).ready(function () {  
    $('table td:eq(2) input').focus(  
        function () {  
            $(this).parent().next().css  
                ("background-color", "#00FF00");  
        });  
    $('table td:eq(2) input').blur(  
        function () {  
            $(this).parent().next().css  
                ("background-color", "#FFFFFF");  
        });  
});
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

\* The :nth-child(n) selector matches every element that is the nth child, regardless of type, of its parent. n can be a number, a keyword, or a formula.

Example

Specify a background color for every <p> element that is the second child of its parent:

```
p:nth-child(2) {  
    background: #ff0000;  
}
```

\* parent.next()

Here: the cell to the right of the current cell.

Reference: CSS3 :nth-child() Selector

### QUESTION 33

You are developing a web page. You create a grid layout by using the following CSS segment.

```
#myGrid {  
    display: -ms-grid;  
    background: gray;  
    -ms-grid-columns: 100px 100px;  
    -ms-grid-rows: 50px 50px 50px;  
}
```

You have the following requirements:

- You must place content in the first column of the second row.
- The content must span two columns.

You need to ensure that the style of the grid meets the requirements.

Which CSS segment should you use?

- ☐ A. 

```
#itemSpan {  
  -ms-grid-row: 2;  
  -ms-grid-column: 1;  
  -ms-grid-column-span: 2  
}
```
- ☐ B. 

```
#itemSpan {  
  -ms-grid-row: 2;  
  -ms-grid-column: 1;  
  -ms-grid-column-span: initial  
}
```
- ☐ C. 

```
#itemSpan {  
  -ms-grid-row: 2;  
  -ms-grid-column: 1;  
  -ms-grid-column-width: 2;  
}
```
- ☐ D. 

```
#itemSpan {  
  -ms-grid-row: 2;  
  -ms-grid-column: 1;  
  -ms-grid-column-span: inherit  
}
```

- A. Option A  
B. Option B  
C. Option C  
D. Option D

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

-ms-grid-column-span

Gets or sets a value that specifies the number of columns of the grid that the object spans.

This property is read-only.

Property values

The number of columns.

Integer value that specifies the number of columns to span.

Reference: -ms-grid-column-span property

#### **QUESTION 34**


You are creating an application by using HTML5 and CSS3. The styles for the pages are derived from five style sheets.

The styles are not being applied correctly to the pages in the application.

You need to apply the styles from highest priority to lowest priority.

In which order should you use the five style sheets? (To answer, move the style sheet types from the list of style sheet types to the answer area and arrange them in the correct order.)

**Select and Place:**



**Correct Answer:**



**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

\* From highest priority to lowest priority.

User important style sheets

Author important style sheets

Author normal style sheets

User normal style sheets

User agent style sheets

\* CSS declarations are applied in this order (from lowest to highest priority):

- User agent declarations (the default styles your browser applies to elements)
- User normal declarations (a user's own stylesheet if they're using one)
- Author normal declarations (this is your normal stylesheet)
- Author important declarations (anything your mark important)
- User important declarations (any important styles from the user's stylesheet)

Reference: Assigning property values, Cascading, and Inheritance; In what order do CSS definitions take priority

<http://www.w3.org/TR/CSS21/cascade.html>

<http://www.quora.com/In-what-order-do-CSS-definitions-take-priority>

### QUESTION 35

You are developing a web page by using HTML5.

You have the following requirements:

- An H1 element must be placed at the top left corner of the page.

- The size and location of the H1 element must not change if additional elements are added to the page.

You need to position the H1 element on the page.

Which CSS3 style should you use?

☐ A. 

```
h1
{
  position:absolute;
  left:0px;
  top:0px;
}
```

☐ C. 

```
h1
{
  position:static;
  left:100%;
  top:100%;
}
```

☐ B. 

```
h1
{
  position:absolute;
  left:100%;
  top:100%;
}
```

☐ D. 

```
h1
{
  position:static;
  left:0px;
  top:0px;
}
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

\* The position property specifies the type of positioning method used for an element (static, relative, absolute or fixed).

absolute: The element is positioned relative to its first positioned (not static) ancestor element

\* For absolutely positioned elements, the left property sets the left edge of an element to a unit to the left/right of the left edge of its containing element.

CSS Syntax

left: auto|length|initial|inherit;



length: Sets the left edge position in px, cm, etc.

Incorrect:

position static: Default value. Elements render in order, as they appear in the document flow

Reference: CSS position Property; CSS left Property

### QUESTION 36

You are styling a box object on a page by using CSS3.

You need to set the transparency of the object to 50%.

Which two CSS3 styles will achieve the goal? (Each correct answer presents a complete solution. Choose two.)

☐ A. 

```
.Box {  
    background: rgb(255,0,0);  
    backface-visibility: hidden;  
}
```

☐ B. 

```
.Box {  
    background: rgb(255,0,0);  
    background: rgba(255,0,0,.5);  
}
```

☐ C. 

```
.Box {  
    background: rgb(255,0,0);  
    opacity: 0.5;  
}
```

☐ D. 

```
.Box {  
    background: rgb(255,0,0);  
    background-color: #fff;  
}
```



- A. Option A
- B. Option B
- C. Option C
- D. Option D

**Correct Answer:** BC

**Section:** (none)

**Explanation**

**Explanation/Reference:**

The RGBA declaration allows you to set opacity (via the Alpha channel) as part of the color value.

Example:

```
div { background-color: rgba(255,0,0,0.5); }
```

The background color has been set to blue, and the opacity set to half.

Example 2:

```
background-color: rgb(0,0,255); opacity: 0.5;
```

The background color has been set to blue, and the opacity set to half.

Reference: A brief introduction to Opacity and RGBA

<http://www.css3.info/introduction-opacity-rgba/>

**QUESTION 37**

You are developing a web page that will be accessed from various types of devices.

You have the following requirements:

- The appropriate display resolution must be selected dynamically based on the device connecting to the page.
- Mobile devices with a maximum width of 480 pixels must be able to use the page.

You need to ensure that the page displays correctly on any device.

How should you build the code? (To answer, select the appropriate options from the drop-down lists in the answer area.)

**Hot Area:**

```
@media screen and (min-width:200px) and (max-width:480px)
{
    #navbar {
        float: none;
        width: 200px;
    }
}

@media screen and (min-width:200px) and (max-width:480px)
{
    #navbar {
        float: left;
        width: 500px;
    }
}
```

**Correct Answer:**

```
@media screen and (min-width:200px) and (max-width:480px)
{
    #navbar {
        float: none;
        width: 200px;
    }
}

@media screen and (min-width:200px) and (max-width:480px)
{
    #navbar {
        float: left;
        width: 500px;
    }
}
```

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

\* The @media rule is used to define different style rules for different media types/devices.

CSS Syntax

```
@media not|only mediatype and (media feature) {  
  CSS-Code;  
}
```

\* Media type: Screen  
Used for computer screens.

Incorrect:  
Not size: there is no media type size.

Reference: CSS3 @media Rule; CSS Media Types

### QUESTION 38

You are developing an HTML5 web application and are styling text.

You need to use the text-transform CSS property.

Which values are valid for the text-transform property?

- A. hidden
- B. blink
- C. capitalize
- D. line-through

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

CSS Syntax

text-transform: none|capitalize|uppercase|lowercase|initial|inherit;

Example

Transform text in different elements:

```
h1 {text-transform:uppercase;}
```

```
h2 {text-transform:capitalize;}
```

```
p {text-transform:lowercase;}
```

Reference: CSS text-transform Property

[http://www.w3schools.com/cssref/pr\\_text\\_text-transform.asp](http://www.w3schools.com/cssref/pr_text_text-transform.asp)

### QUESTION 39

You are developing a website that has many web pages with hyperlinks to other sites.

You need to ensure that if a hyperlink contains an image, the linked web page opens in a new window.

Which jQuery code segment or segments should you use? (To answer, drag the appropriate line of code to the correct location. Each line of code may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

**Select and Place:**

```
$("a img").each(function () {
```

```
$(this).parent().attr('target', '_blank')
```

```
$("a").each(function () {
```

```
$(this).attr('target', '_blank')
```

### Answer Area

```
<!DOCTYPE html>
<html>
<head>
  <title></title>
  <script src="http://code.jquery.com/jquery-latest.js">
  </script>
</head>
<body>
  <a href="http://www.microsoft.com">
    
  </a>
</body>
<script>
  $(document).ready(function () {
    [ ]
    [ ]
  });
});
</script>
```

**Correct Answer:**

```
$( "a" ).each( function () {
```

```
$( this ).attr( 'target', '_blank'
```

### Answer Area

```
<!DOCTYPE html>
<html>
<head>
  <title></title>
  <script src="http://code.jquery.com/jquery-latest.js">
  </script>
</head>
<body>
  <a href="http://www.microsoft.com">
    
  </a>
</body>
<script>
  $(document).ready(function () {
    $( "a img" ).each( function () {
      $( this ).parent().attr( 'target', '_blank'
```



**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

\* a img

All elements that are descendants of an element.

\* (this).parent

This is the element and is the parent.

**QUESTION 40**

You are developing a page that includes text and an illustration. The web page resembles the following image.



You have the following requirements:

- The illustration must be in the center of the page.
- The text must flow around the left, right, top, and bottom of the illustration.

You need to ensure that the layout of the web page meets the requirements.

Which line of code should you use?

- A. `-ms-wrap-flow: both;`
- B. `-ms-wrap-flow: clear;`
- C. `-ms-wrap-flow: maximum;`
- D. `-ms-wrap-flow: auto;`

**Correct Answer: A**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

. -ms-wrap-flow

Gets or sets a value that specifies how exclusions impact inline content within block-level elements.

Syntax

-ms-wrap-flow: auto | both | start | end | maximum | clear

both

Inline flow content can flow on all sides of the exclusion.

Reference: -ms-wrap-flow property

[http://msdn.microsoft.com/en-us/library/ie/hh673558\(v=vs.85\).aspx](http://msdn.microsoft.com/en-us/library/ie/hh673558(v=vs.85).aspx)

<http://dev.w3.org/csswg/css3-exclusions/>

#### **QUESTION 41**

You are developing a web page that has a group of H1 and H2 elements. The page also includes a CSS class named underlineMe.

You have the following requirements:

- The font color of all H1 and H2 elements must be changed to red.
- The CSS class underlineMe must be applied to all H1 and H2 elements.

You need to update the web page to meet the requirements.

Which code segment should you use?