

Web Storage api and JSON	element.dataset & data-* attributes	TypedArray
<p>IE8+</p> <p>localStorage: <code>localStorage.length;</code> <code>localStorage.key(index);</code> <code>localStorage.getItem(key);</code> <code>localStorage.setItem(key, data);</code> <code>localStorage.removeItem(key);</code> <code>localStorage.clear();</code></p> <p>sessionStorage: <code>sessionStorage.length;</code> <code>sessionStorage.key(index);</code> <code>sessionStorage.getItem(key);</code> <code>sessionStorage.setItem(key, data);</code> <code>sessionStorage.removeItem(key);</code> <code>sessionStorage.clear();</code></p> <p>hasItem: <code>localStorage.getItem(key) !== null</code> <code>sessionStorage.getItem(key) !== null</code></p> <p>setJSON: <code>localStorage.setItem(key, JSON.stringify(object));</code> <code>sessionStorage.setItem(key, JSON.stringify(object));</code></p> <p>getJSON: <code>JSON.parse(localStorage.getItem(key));</code> <code>JSON.parse(sessionStorage.getItem(key));</code></p>	<ul style="list-style-type: none"> - IE11 compatible - element data-* attributes - no methods and events <p>camelcase: <code>element.data-name</code> -> <code>element.dataset.name</code> <code>element.data-first-second</code> -> <code>element.dataset.firstSecond</code></p> <p>set: <code>element.dataset.name = "value";</code> <code>element.dataset["name"] = "value";</code> <code>element.setAttribute("data-name", "value");</code> <code>element["data-name"] = "value";</code></p> <p>get: <code>element.dataset.name;</code> <code>element.dataset["name"];</code> <code>element.getAttribute("data-name");</code> <code>element["data-name"];</code></p> <p>remove: <code>element.removeAttribute("data-name");</code></p> <p>check: <code>element.hasAttribute("data-name");</code></p>	<pre>new <TypedArray>() ; ES2017 new <TypedArray>(length); new <TypedArray>(typedArray); new <TypedArray>(object); new <TypedArray>(buffer[,byteOffset[,len]]); <TypedArray>.from(arrayLike, mapFn); <TypedArray>.of(element1, /*...,*/ elementN); Int8Array(); -128 to 127, 1 byte, int8_t, Shortint Uint8Array(); 0 to 255, 1 byte, uint8_t, Byte Uint8ClampedArray(); 0 to 255, 1 byte, uint8_t, Byte Int16Array(); -32768 to 32767, 2 byte, int16_t, Smallint Uint16Array(); 0 to 65535, 2 byte, uint16_t, Word Int32Array(); -2147483648 to 2147483647, 4 byte, int32_t Uint32Array(); 0 to 4294967295, 4 byte, uint32_t, Longword BigInt64Array(); -2**63 to 2**63-1, 8 byte, int64_t, Int64 BigUint64Array(); 0 to 2**64-1, 8 byte, uint64_t, Qword Float16Array(); -65504 to 65504, 2 byte Float32Array(); 1.2x10-38 to 3.4x1038, 4 byte, float, Real Float64Array(); 5.0x10-324 to 1.8x10308, 8 byte, Double</pre>
DOM events		
<code>target.addEventListener(<type>,<listener>[,useCapture]); or target.addEventListener(<type>,<listener>[,options]);</code> <code>target.removeEventListener(<type>,<listener>[,useCapture]); or target.removeEventListener(<type>,<listener>[,options]);</code> <code>target.dispatchEvent(<event>); and target.type(); or target["type"]();</code>		

element.classList	JSON
<p>IE10+IE11 don't have support for classList on SVG or MathML elements.</p> <pre data-bbox="136 303 848 362">element.classList.add(String[,String]); IE10+11: yes (except the multiple arguments)</pre> <pre data-bbox="136 393 848 452">element.classList.remove(String[,String]); IE10+11: yes (except the multiple arguments)</pre> <ul style="list-style-type: none"> - Removing a class that does not exist, does NOT throw an error. <pre data-bbox="136 552 698 611">element.classList.contains(String); IE10+11: yes</pre> <pre data-bbox="136 643 803 701">element.classList.toggle(String[,force]); IE10+11: yes (except the second argument)</pre> <ul style="list-style-type: none"> - When only one argument is present: Toggle class value; if class exists then remove it and return false, if not, then add it and return true. - When a second argument is present: If the second argument evaluates to true, add specified class value, and if it evaluates to false, remove it. <pre data-bbox="136 917 637 976">element.classList.item(Number); IE10+11: yes</pre> <pre data-bbox="136 1008 541 1067">element.classList.length; IE10+11: yes</pre> <pre data-bbox="136 1098 877 1157">element.classList.replace(oldClass, newClass); IE10+11: No and the method isn't compatible with the Safari and mobile browsers too.</pre> <p>Remove all classes:</p> <pre data-bbox="136 1251 511 1278">element.className = "";</pre>	<p>IE8+</p> <p>Valid Data Types</p> <ul style="list-style-type: none"> - string - number - object (containing valid JSON values) - array - boolean - date - null <p>Invalid Data Types</p> <ul style="list-style-type: none"> - function - Symbol - NaN, Infinity, undefined - will be "null" - an object with method(s) (functions) - Map, Set, WeakMap, WeakSet - fix: convert to array - BigInt - fixed in Celestra - BigInt.prototype.toJSON(); <p>JSON.stringify(value[,replacer[,space]]);</p> <p>Convert a JavaScript object to a JSON string.</p> <pre data-bbox="1174 886 1881 944">JSON.stringify({ a: 1, b: "2", c: true }); // -> "{\"a\":1,\"b\":\"2\",\"c\":true}"</pre> <pre data-bbox="1174 976 1724 1035">JSON.stringify([1, 2, 3, 4, 5]); // -> "[1,2,3,4,5]"</pre> <p>JSON.parse(text[,reviver]);</p> <p>Parses a JSON string and returns a JavaScript object.</p> <pre data-bbox="1174 1160 2038 1219">JSON.parse(JSON.stringify({a: 1, b: "2", c: true})); // -> Object { a: 1, b: "2", c: true }</pre> <pre data-bbox="1174 1251 1914 1310">JSON.parse(JSON.stringify([1, 2, 3, 4, 5])); // -> Array(5) [1, 2, 3, 4, 5]</pre>

DOMParser	BigInt (Int64)
IE9: XML support IE10+IE11: XML, SVG and HTML support	
<pre>var parser = new DOMParser(); var doc = parser.parseFromString("sourceStr", "application/xml");</pre>	
Returns a Document, but not a SVGDocument nor a HTMLDocument.	
<pre>var parser = new DOMParser(); var doc = parser.parseFromString(sourceStr, "image/svg+xml");</pre>	
Returns a SVGDocument, which also is a Document.	
<pre>var parser = new DOMParser(); var doc = parser.parseFromString(sourceStr, "text/html");</pre>	
Returns a HTML document.	
DOMParser sample function	
<pre>function parseHTML (str) { return Array.from((new DOMParser()) .parseFromString(str, "text/html") .childNodes[0] .childNodes[1] .childNodes); }</pre>	
<pre>parseHTML("<div>1<p>2</p><p>3</p></div>" + "<div>4<p>5</p><p>6</p></div>" + "<div>7</div>" + "<p>8</p>"); // -> Array(4) [div, div, div, p]</pre>	
<pre>// Tested in IE11, Edge, Firefox and Chrome.</pre>	
	<p>Operators: +, *, -, **, %, Bitwise operators (e.g.: >>>)</p> <pre>!0n // -> true !1n // -> false 4n / 2n // -> 2n 5n / 2n // -> 2n, not 2.5n -> rounded 1n < 2 // -> true 2n > 1 // -> true 2n > 2 // -> false 2n >= 2 // -> true let mixed = [4n, 6, -12n, 10, 4, 0, 0n]; mixed.sort(); // -> [-12n, 0, 0n, 4n, 4, 6, 10]</pre> <p>Methods</p> <pre>BigInt.asIntN(); - BigInt value to a signed integer BigInt.asUintN(); - BigInt value to an unsigned integer BigInt.prototype.toLocaleString(); BigInt.prototype.toString(); BigInt.prototype.valueOf();</pre>

Fetch	Fetch POST
<pre> Firefox, Firefox for Android 39 Chrome, Chrome Android, WebView Android 42 Edge 14 Opera 29 Safari 10.1, Safari on iOS 10.3 Samsung Internet 4.0 Deno 1, Node.js 18 // Example GET method implementation with TEXT: fetch("https://api.coindesk.com/v1/bpi/currentprice.json") .then(response => response.text()) .then(data => console.log(data)) .catch(error => console.log(error)); // Example GET method implementation with JSON: fetch("https://api.coindesk.com/v1/bpi/currentprice.json") .then(response => response.json()) .then(data => console.log(data.bpi.USD.rate)) .catch(error => console.log(error)); // Example GET method implementation with TEXT and JSON: fetch("https://api.coindesk.com/v1/bpi/currentprice.json") .then(response => response.text()) .then(text => console.log(JSON.parse(text).bpi.USD.rate+"\n"+text)) .catch(error => console.log(error)); // Example POST method implementation with upload JSON data: const data = { username: "example" }; fetch("https://example.com/profile", { method: "POST", // or "PUT" headers: { "Content-Type": "application/json", }, body: JSON.stringify(data), }) .then(response => response.json()) .then(data => { console.log("Success:", data); }) .catch((error) => { console.error("Error:", error); }); </pre>	<pre> // Example POST method implementation: // Default options are marked with * async function postData(url = "url", data = {}) { const response = await fetch(url, { method: "POST", // *GET, POST, PUT, DELETE, etc. mode: "cors", // no-cors, *cors, same-origin cache: "no-cache", // *default, no-cache, reload, force-cache, onlyIfCached credentials: "same-origin", // include, *same-origin, omit headers: {"Content-Type": "application/json"}, // "Content-Type": "application/x-www-form- urlencoded" redirect: "follow", // manual, *follow, error referrerPolicy: "no-referrer", // no-referrer, *no-referrer-when-downgrade, origin, originWhenCrossOrigin, sameOrigin, strictOrigin, strictOriginWhenCrossOrigin, unsafeUrl body: JSON.stringify(data) // body data type must match "Content-Type" header }); return response.json(); // parses JSON response into native JavaScript objects } postData("https://example.com/answer", { answer: 42 }) .then(data => { console.log(data); }) // JSON data parsed by `data.json()` call </pre>

Nullish coalescing operator x ?? y	Logical nullish assignment x ??= y	Logical AND assignment x &&= y	Logical OR assignment x = y
FF 72, Chrome and Edge 80, Safari 13.1, Safari on iOS 13.4, Samsung Internet 13	FF 79, Chrome and Edge 85, Safari 14, Samsung Internet 14		
The nullish coalescing operator (??) is a logical operator that returns its right-hand side operand when its left-hand side operand is null or undefined, and otherwise returns its left-hand side operand.	The logical nullish assignment operator only assigns if x is nullish (null or undefined).	The logical AND assignment operator only assigns if x is truthy.	The logical OR assignment operator only assigns if x is falsy. (false, 0, -0, 0n, "", '', ` , null, undefined, NaN)
<pre>const nullValue = null; const emptyText = ""; // falsy const someNumber = 42; const valA = nullValue ?? "defaultA"; // "defaultA" const valB = emptyText ?? "default B"; // "" (empty string is not null or undefined) const valC = someNumber ?? 0; // 42</pre>	<pre>function config (options) { options.duration ??= 100; options.speed ??= 25; return options; } config({duration: 125}); // {duration: 125, speed: 25} config({}); // {duration: 100, speed: 25}</pre>	<pre>let x = 0; let y = 1; x &&= 0; // 0 x &&= 1; // 0 y &&= 1; // 1 y &&= 0; // 0</pre>	<pre>const a = { duration: 50, title: "" }; a.duration = 10; // 5 a.title = "title is empty."; // "title is empty"</pre>
<pre>let count = 0; let text = ""; let qty = count 42; // 42 let message = text "hi!"; // "hi!"</pre>	<pre>const a = { duration: 50 }; a.duration ??= 10; // 50 a.speed ??= 25; // 25</pre>	<pre>let a = 1; let b = 0; a &&= 2; // 2 b &&= 2; // 0</pre>	
		equivalent	not equivalent
Nullish coalescing operator (??)	x ?? y	(x != null) ? x : y	
Logical nullish assignment (??=)	x ??= y	x ?? (x = y);	x = x ?? y;
Logical AND assignment (&&=)	x &&= y	x && (x = y);	x = x && y;
Logical OR assignment (=)	x = y	x (x = y);	x = x y;

Reflect object		
ES6, no IE11 support - FF 42, Chrome 49, Edge 12, Safari 10, Safari on iOS 10, Samsung Internet 5.0		
Function	Description	equivalent
Reflect.apply(target, thisArgument, argumentsList);	Calls a target function with arguments as specified by the argumentsList parameter.	Function.prototype.apply.call(target, thisArgument, argumentsList);
Reflect.construct(target, argumentsList [,newTarget]);	The new operator as a function.	new target(...argumentsList);
Reflect.defineProperty(target,propertyKey, attributes);	Similar to Object.defineProperty(). Returns a boolean that is true if the property was successfully defined.	Object.defineProperty(target, propertyKey, attributes);
Reflect.deleteProperty(target,propertyKey);	The delete operator as a function.	delete target[propertyKey];
Reflect.get(target,propertyKey[,receiver]);	Returns the value of the property of the object.	target[propertyKey];
Reflect.getOwnPropertyDescriptor(target, propertyKey);	Returns a property descriptor of the given property if it exists on the object, undefined otherwise.	Object.getOwnPropertyDescriptor(target, propertyKey);
Reflect.getPrototypeOf(target);	Object.getPrototypeOf(target);	Object.getPrototypeOf(target);
Reflect.has(target,propertyKey);	Returns a boolean whether the target has the property.	propertyKey in target;
Reflect.isExtensible(target);	Returns a boolean that is true if the target is extensible.	Object.isExtensible(target);
Reflect.ownKeys(target);	Returns an array of the target object's own (not inherited) property keys.	Object.getOwnPropertyNames(target).concat(Object.getOwnPropertySymbols(target));
Reflect.preventExtensions(target);	Prevents new properties from ever being added to an object. Similar to Object.preventExtensions().	Object.preventExtensions(target);
Reflect.set(target,propertyKey,value [,receiver]);	Assigns values to properties. Returns a boolean that is true if the update was successful.	target[propertyKey] = value;
Reflect.setPrototypeOf(target,prototype);	Sets the prototype of an object. Returns a boolean that is true if the update was successful.	Object.setPrototypeOf(target,prototype);

Map Object	Set Object helper functions
<pre> var myMap = new Map([iterable]); // The Map objects are iterable. for (let [key, value] of myMap) { console.log(` \${key} = \${value}`); } var cloneMap = new Map(myMap); Map.prototype.size; Map.prototype.get(<key>); -> value/undefined Map.prototype.set(<key>,<value>); -> Map object Map.prototype.has(<key>); -> boolean Map.prototype.delete(<key>); -> boolean Map.prototype.clear(); -> undefined Map.prototype.forEach(function (value,key,map)); -> undefined Map.prototype.keys(); -> iterator of keys Map.prototype.values(); -> iterator of values Map.prototype.entries(); -> iterator of [key, value] </pre>	<pre> function isSuperset(set, subset) { for (const elem of subset) { if (!set.has(elem)) { return false; } } return true; } function union(setA, setB) { const _union = new Set(setA); for (const elem of setB) { _union.add(elem); } return _union; } function intersection(setA, setB) { const _intersection = new Set(); for (const elem of setB) { if (setA.has(elem)) { _intersection.add(elem); } } return _intersection; } function difference(setA, setB) { const _difference = new Set(setA); for (const elem of setB) { _difference.delete(elem); } return _difference; } function symmetricDifference(setA, setB) { const _d = new Set(setA); for (const e of setB) { if (_d.has(e)) { _d.delete(e); } else { _d.add(e); } } return _d; } </pre>
Set Object	<pre> var mySet = new Set([iterable]); // The Set objects are iterable. for (const item of mySet) { console.log(item); } var cloneSet = new Set(mySet); Set.prototype.size; Set.prototype.add(<value>); -> Set object Set.prototype.has(<value>); -> boolean Set.prototype.delete(<value>); -> boolean Set.prototype.clear(); -> undefined Set.prototype.forEach(function (value,value,set)); -> undefined Set.prototype.keys(); -> iterator of values Set.prototype.values(); -> iterator of values Set.prototype.entries(); -> iterator of [value, value] </pre>

Array.fromAsync();	Set methods
<pre>Array.fromAsync(<object>[,mapFn[,thisArg]]) .then((resultArray) => /* todo with resultArray */); Object types: async iterable, iterable (Array, Map, Set, NodeList, etc.), array-like mapfn parameters: element, index async function* asyncIterable () { for (let i = 0; i < 5; i++) { await new Promise((resolve)=> setTimeout(resolve,50*i)); yield i; } Array.fromAsync(asyncIterable()) .then((res) => console.log("asyncIterable1: "+res)); // asyncIterable1: 0,1,2,3,4 Array.fromAsync(asyncIterable(), (x) => x*2) .then((res) => console.log("asyncIterable2: "+res)); // asyncIterable2: 0,2,4,6,8 Array.fromAsync([4,5,6,7,8]) .then((res) => console.log("[4,5,6,7,8]: "+res)); // [4,5,6,7,8]: 4,5,6,7,8 Array.fromAsync([4,5,6,7,8], (x) => x*2) .then((res) => console.log("[4,5,6,7,8] + fn: "+res)); // [4,5,6,7,8] + fn: 8,10,12,14,16 Array.fromAsync(new Set([4,5,6,6,10])) .then((res) => console.log("Set: "+res)); // Set: 4,5,6,10 Array.fromAsync(new Set([4,5,6,6,10]), (x) => x*2) .then((res) => console.log("Set + fn: "+res)); // Set + fn: 8,10,12,20 Array.fromAsync({"0": 3, "1": 4, "2": 5, length: 3}) .then((res) => console.log("arraylike: "+res)); // arraylike: 3,4,5 Array.fromAsync({ "0": 3, "1": 4, "2": 5, length: 3}, (x) => x*2).then((res) => console.log("arraylike + fn: "+res)); // arraylike + fn: 6,8,10</pre>	<p>Chrome, Chrome Android, Edge, WebView Android v122 Firefox, Firefox for Android v127 Safari, Safari on iOS, WebView on iOS v17 Opera v108, Opera Android v81 Samsung Internet v26.0 Deno 1.42, Node.js 22.0.0</p> <p>Set.prototype.intersection(other): Set Set.prototype.union(other): Set Set.prototype.difference(other): Set Set.prototype.symmetricDifference(other): Set Set.prototype.isSubsetOf(other): Boolean Set.prototype.isSupersetOf(other): Boolean Set.prototype.isDisjointFrom(other): Boolean</p> <pre>var setA = new Set([1]); var setB = new Set([1,2]); var setC = new Set([2,3]); console.log(setB.intersection(setC)); // Set [2] console.log(setB.union(setC)); // Set(3) [1, 2, 3] console.log(setB.difference(setC)); // Set [1] console.log(setB.symmetricDifference(setC)); // Set [1, 3] console.log(setB.isSupersetOf(setA)); // true console.log(setA.isSupersetOf(setC)); // false console.log(setA.isSubsetOf(setB)); // true console.log(setA.isSubsetOf(setC)); // false console.log(setA.isDisjointFrom(setC)); // true - there are no common elements console.log(setA.isDisjointFrom(setB)); // false - there are common elements</pre>

Iterator methods	Iterator methods samples
<p>Firefox, Firefox for Android 131 Chrome, Edge, Webview Android 122 Opera 108 Safari, Safari in iOS, Webview on iOS 18.4 Samsung Internet 26.0 Deno 1.42, Node.js 22</p> <p>Usage:</p> <pre>Iterator.from(object); Iterator.prototype.drop(limit); Iterator.prototype.every(callbackFn(Element, index)); Iterator.prototype.filter(callbackFn(Element, index)); Iterator.prototype.find(callbackFn(Element, index)); Iterator.prototype.flatMap(callbackFn(Element, index)); Iterator.prototype.forEach(callbackFn(Element, index)); Iterator.prototype.map(callbackFn(Element, index)); Iterator.prototype.reduce(callbackFn(accumulator, currentValue, currentIndex), initialValue: Optional); Iterator.prototype.some(callbackFn(Element, index)); Iterator.prototype.take(limit); Iterator.prototype.toArray(); Equivalent to Array.from(iterator) and [...iterator] Iterator.prototype[Symbol.iterator]();</pre>	<pre>var A1 = [1, 2, 3, 4, 5, 6]; console.log(Iterator.from(A1)); // Iterator { 1, 2, 3, 4, 5, 6 } console.log(A1.values().drop(3)); // Iterator { 4, 5, 6 } console.log(A1.values().every((x) => x > 0)); // true console.log(A1.values().every((x) => x > 3)); // false console.log(A1.values().filter((x) => x > 3)); // Iterator { 4, 5, 6 } console.log(A1.values().find((x) => x > 3)); // 4 var M1 = new Map([["a", 1], ["b", 2], ["c", 3]]); var M2 = new Map([["d", 4], ["e", 5], ["f", 6]]); console.log(new Map([M1, M2].values().flatMap((x) => x))); // Map(6) { a → 1, b → 2, c → 3, d → 4, e → 5, f → 6 } console.log(A1.values().take(2).forEach((el, i) => console.log(i+": "+el))); // "0 : 1", "1 : 2" console.log(A1.values().map((x) => x * 2)); // Iterator { 2, 4, 6, 8, 10, 12 } console.log(A1.values().reduce((ac, it) => (ac + it), 0)); // 21 console.log(A1.values().some((x) => x > 3)); // true console.log(A1.values().some((x) => x > 6)); // false console.log(A1.values().take(3)); // Iterator { 1, 2, 3 } console.log(A1.values().toArray()); // Array(6) [1, 2, 3, 4, 5, 6]</pre>

Javascript Equality comparisons and sameness					
X	Y	loose equality	strict equality	Same-value	Same-value-zero
		X == Y	X === Y	Object.is(X, Y)	[X].includes(Y)
					X === Y (X !== X && Y !== Y)
undefined	undefined	✓ true	✓ true	✓ true	✓ true
null	null	✓ true	✓ true	✓ true	✓ true
true	true	✓ true	✓ true	✓ true	✓ true
false	false	✓ true	✓ true	✓ true	✓ true
"foo"	"foo"	✓ true	✓ true	✓ true	✓ true
0	0	✓ true	✓ true	✓ true	✓ true
+0	-0	✓ true	✓ true	✗ false	✓ true
+0	0	✓ true	✓ true	✓ true	✓ true
-0	0	✓ true	✓ true	✗ false	✓ true
0n	-0n	✓ true	✓ true	✓ true	✓ true
0	false	✓ true	✗ false	✗ false	✗ false
""	false	✓ true	✗ false	✗ false	✗ false
""	0	✓ true	✗ false	✗ false	✗ false
"0"	0	✓ true	✗ false	✗ false	✗ false
"17"	17	✓ true	✗ false	✗ false	✗ false
[1, 2]	"1,2"	✓ true	✗ false	✗ false	✗ false
new String("foo")	"foo"	✓ true	✗ false	✗ false	✗ false
null	undefined	✓ true	✗ false	✗ false	✗ false
null	false	✗ false	✗ false	✗ false	✗ false
undefined	false	✗ false	✗ false	✗ false	✗ false
{foo: "bar"}	{foo: "bar"}	✗ false	✗ false	✗ false	✗ false
new String("foo")	new String("foo")	✗ false	✗ false	✗ false	✗ false
0	null	✗ false	✗ false	✗ false	✗ false
0	NaN	✗ false	✗ false	✗ false	✗ false
"foo"	NaN	✗ false	✗ false	✗ false	✗ false
NaN	NaN	✗ false	✗ false	✓ true	✓ true

<u>StructuredClone();</u>	<u>StructuredClone(); Supported types</u>
<p>Firefox, Firefox for Android 94 Chrome, Chrome Android, WebView Android 98 Edge 98 Opera 84 Opera Android 68 Safari, Safari for iOS, WebView on iOS 15.4 Samsung Internet 18 Deno 1.14, Node.js 17 Supported in all major browsers.</p> <p>The <code>structuredClone()</code> function creates a deep clone of a given value using the structured clone algorithm.</p> <p>Usage:</p> <pre>structuredClone(value) structuredClone(value, options)</pre> <p>Options: <code>transfer</code>: An array of transferable objects that will be moved rather than cloned to the returned object.</p> <p>Example:</p> <pre>let x = { "a": [1, 2], "b": "lorem ipsum" }; let y = structuredClone(x); console.log(x === y); // false console.log(x.a === y.a); // false console.log(x.a[0] === y.a[0]); // true console.log(x.a[1] === y.a[1]); // true console.log(x.b === y.b); // true</pre>	<p>Primitive types, except Symbol:</p> <ul style="list-style-type: none"> Null Undefined Boolean Number BigInt String <p>Object types:</p> <ul style="list-style-type: none"> Array ArrayBuffer Boolean DataView Date Map Number Object objects: but only plain objects (e.g., from object literals). RegExp (lastIndex is not preserved) Set String TypedArray <p>Error objects:</p> <ul style="list-style-type: none"> AggregateError (cloning not supported in every JS interpreter) Error EvalError RangeError ReferenceError SyntaxError TypeError URIError <p>Web/API types:</p> <ul style="list-style-type: none"> AudioData Blob CropTarget CryptoKey DOMException: browsers must serialize the properties name and message. Other attributes may also be serialized/cloned. DOMMatrix DOMMatrixReadOnly DOMPoint DOMPointReadOnly DOMQuad DOMRect DOMRectReadOnly EncodedAudioChunk EncodedVideoChunk FencedFrameConfig File FileList FileSystemDirectoryHandle FileSystemFileHandle FileSystemHandle GPUCompilationInfo GPUCompilationMessage GPUPipelineError ImageBitmap ImageData RTCCertificate RTCEncodedAudioFrame RTCEncodedVideoFrame VideoFrame WebTransportError

<u>Map.prototype.getOrInsert(key, defaultValue);</u>	<u>WeakMap.prototype.getOrInsert(key, defaultValue);</u>
<pre>const map1 = new Map([["DNA", "42"]]); console.log(map1.getOrInsert("DNA", "54")); // 42 console.log(map1.getOrInsert("DNA2", "default")); // "default" console.log(map1.get("DNA2")); // "default"</pre>	<pre>const wml = new WeakMap(); const obj1 = {}; console.log(wml.get(obj1)); // undefined console.log(wml.getOrInsert(obj1, 42)); // 42 console.log(wml.get(obj1)); // 42 console.log(wml.getOrInsert(obj1, "default")); // 42 console.log(wml.get(obj1)); // 42</pre>
<u>Map.prototype.getOrInsertComputed(key, callback);</u>	<u>WeakMap.prototype.getOrInsertComputed(key, callback);</u>
<pre>const map1 = new Map([["DNA", 42]]); const helperFN1 = (prop) => 54; console.log(map1.get("DNA")); // 42 console.log(map1.getOrInsertComputed("DNA", helperFN1)); // 42 console.log(map1.get("DNA")); // 42 console.log(map1.getOrInsert("DNA2", helperFN1("DNA2"))); // 54 console.log(map1.getOrInsertComputed("DNA2", helperFN1)); // 54 console.log(map1.get("DNA2")); // 54</pre>	<pre>const weakmap1 = new WeakMap(); const obj1 = {}; const obj2 = {}; const helperFN1 = (prop) => 54; console.log(weakmap1.get(obj1)); // undefined console.log(weakmap1.getOrInsert(obj1, 42)); // 42 console.log(weakmap1.getOrInsertComputed(obj1, helperFN1)); // 42 console.log(weakmap1.get(obj1)); // 42 console.log(weakmap1.get(obj2)); // undefined console.log(weakmap1.getOrInsertComputed(obj2, helperFN1)); // 54 console.log(weakmap1.get(obj2)); // 54</pre>