

JavaScript

A JavaScript cheat sheet with the most important concepts, functions, methods, and more. A complete quick reference for beginners.

Getting Started

Introduction

JavaScript is a lightweight, interpreted programming language.

[JSON cheatsheet](#) (cheatsheets.zip)

[Regex in JavaScript](#) (cheatsheets.zip)

Console

```
// => Hello world!
console.log("Hello world!");

// => Hello CheatSheets.zip
console.warn("hello %s", "CheatSheets.zip");

// Prints error message to stderr
console.error(new Error("Oops!"));
```

Numbers

```
let amount = 6;
let price = 4.99;
```

Variables

```
let x = null;
let name = "Tammy";
const found = false;

// => Tammy, false, null
console.log(name, found, x);

var a;
console.log(a); // => undefined
```

Strings

```
let single = "Wheres my bandit hat?";
let double = "Wheres my bandit hat?";

// => 21
console.log(single.length);
```

Arithmetic Operators

```
5 + 5 = 10    // Addition
10 - 5 = 5    // Subtraction
5 * 10 = 50   // Multiplication
10 / 5 = 2    // Division
10 % 5 = 0    // Modulo
```

Comments

```
// This line will denote a comment

/*
The below configuration must be
changed before deployment.
*/
```

Assignment Operators

```
let number = 100;

// Both statements will add 10
number = number + 10;
number += 10;

console.log(number);
// => 120
```

String Interpolation

```
let age = 7;

// String concatenation
"Tommy is " + age + " years old.";

// String interpolation
`Tommy is ${age} years old.`;
```

let Keyword

```
let count;
console.log(count); // => undefined
count = 10;
console.log(count); // => 10
```

const Keyword

```
const numberOfColumns = 4;

// TypeError: Assignment to constant...
numberOfColumns = 8;
```

JavaScript Conditionals

if Statement

```
const isMailSent = true;

if (isMailSent) {
  console.log("Mail sent to recipient");
}
```

Ternary Operator

```
var x = 1;

// => true
result = x == 1 ? true : false;
```

```
true || false; // true
10 > 5 || 10 > 20; // true
false || false; // false
10 > 100 || 10 > 20; // false
```

Logical Operator &&

```
true && true; // true
1 > 2 && 2 > 1; // false
true && false; // false
4 === 4 && 3 > 1; // true
```

Comparison Operators

```
1 > 3; // false
3 > 1; // true
250 >= 250; // true
1 === 1; // true
1 === 2; // false
1 === "1"; // false
```

Logical Operator !

```
let lateToWork = true;
let oppositeValue = !lateToWork;

// => false
console.log(oppositeValue);
```

Nullish coalescing operator ??

```
null ?? "I win"; // 'I win'
undefined ?? "Me too"; // 'Me too'

false ?? "I lose"; // false
0 ?? "I lose again"; // 0
"" ?? "Damn it"; // ''
```

```
const size = 10;

if (size > 100) {
  console.log("Big");
} else if (size > 20) {
  console.log("Medium");
} else if (size > 4) {
  console.log("Small");
} else {
  console.log("Tiny");
}
// Print: Small
```

```
const food = "salad";

switch (food) {
  case "oyster":
    console.log("The taste of the sea");
    break;
  case "pizza":
    console.log("A delicious pie");
    break;
  default:
    console.log("Enjoy your meal");
}
```

```
0 == false; // true
0 === false; // false, different type
1 == "1"; // true, automatic type conversion
1 === "1"; // false, different type
null == undefined; // true
null === undefined; // false
"0" == false; // true
"0" === false; // false
```

The == just check the value, === check both the value and the type.

JavaScript Functions

Functions

```
// Defining the function:
function sum(num1, num2) {
  return num1 + num2;
}

// Calling the function:
sum(3, 6); // 9
```

Anonymous Functions

```
// Named function
function rocketToMars() {
  return "BOOM!";
}

// Anonymous function
const rocketToMars = function () {
  return "BOOM!";
};
```

With two arguments

```
const sum = (param1, param2) => {  
  return param1 + param2;  
};  
console.log(sum(2, 5)); // => 7
```

With no arguments

```
const printHello = () => {  
  console.log("hello");  
};  
printHello(); // => hello
```

With a single argument

```
const checkWeight = (weight) => {  
  console.log(`Weight : ${weight}`);  
};  
checkWeight(25); // => Weight : 25
```

Concise arrow functions

```
const multiply = (a, b) => a * b;  
// => 60  
console.log(multiply(2, 30));
```

Arrow function available starting ES2015

return Keyword

```
// With return  
function sum(num1, num2) {  
  return num1 + num2;  
}  
  
// The function doesn't output the sum  
function sum(num1, num2) {  
  num1 + num2;  
}
```


Calling Functions

```
// Defining the function
function sum(num1, num2) {
  return num1 + num2;
}

// Calling the function
sum(2, 4); // 6
```

Function Expressions

```
const dog = function () {
  return "Woof!";
};
```

Function Parameters

```
// The parameter is name
function sayHello(name) {
  return `Hello, ${name}!`;
}
```

Function Declaration

```
function add(num1, num2) {
  return num1 + num2;
}
```

JavaScript Scope

Scope

```
function myFunction() {
  var pizzaName = "Margarita";
  // Code here can use pizzaName
}

// Code here can't use pizzaName
```

Block Scoped Variables

```
const isLoggedIn = true;

if (isLoggedIn == true) {
  const statusMessage = "Logged in.";
}

// Uncaught ReferenceError...
console.log(statusMessage);
```

Global Variables

```
// Variable declared globally
const color = "blue";

function printColor() {
  console.log(color);
}

printColor(); // => blue
```

let vs var

```
for (let i = 0; i < 3; i++) {
  // This is the Max Scope for 'let'
  // i accessible ✓
}
// i not accessible ✗
```

```
for (var i = 0; i < 3; i++) {
  // i accessible ✓
}
// i accessible ✓
```

var is scoped to the nearest function block, and let is scoped to the nearest enclosing block.

```
// Prints 3 thrice, not what we meant.  
for (var i = 0; i < 3; i++) {  
  setTimeout(_ => console.log(i), 10);  
}
```

```
// Prints 0, 1 and 2, as expected.  
for (let j = 0; j < 3; j++) {  
  setTimeout(_ => console.log(j), 10);  
}
```

The variable has its own copy using `let`, and the variable has shared copy using `var`.

JavaScript Arrays

Arrays

```
const fruits = ["apple", "orange", "banana"];  
  
// Different data types  
const data = [1, "chicken", false];
```

Property `.length`

```
const numbers = [1, 2, 3, 4];  
  
numbers.length; // 4
```

Index

```
// Accessing an array element  
const myArray = [100, 200, 300];  
  
console.log(myArray[0]); // 100  
console.log(myArray[1]); // 200
```

Mutable chart

	add	remove	start	end
push	✓			✓
pop		✓		✓
unshift	✓		✓	
shift		✓	✓	

Array.push()

```
// Adding a single element:  
const cart = ["apple", "orange"];  
cart.push("pear");
```

```
// Adding multiple elements:  
const numbers = [1, 2];  
numbers.push(3, 4, 5);
```

Add items to the end and returns the new array length.

Array.pop()

```
const fruits = ["apple", "orange", "banana"];  
  
const fruit = fruits.pop(); // 'banana'  
console.log(fruits); // ["apple", "orange"]
```

Remove an item from the end and returns the removed item.

Array.shift()

```
let cats = ["Bob", "Willy", "Mini"];  
  
cats.shift(); // ['Willy', 'Mini']
```

Remove an item from the beginning and returns the removed item.

Array.unshift()

```
let cats = ["Bob"];

// => ['Willy', 'Bob']
cats.unshift("Willy");

// => ['Puff', 'George', 'Willy', 'Bob']
cats.unshift("Puff", "George");
```

Add items to the beginning and returns the new array length.

Array.concat()

```
const numbers = [3, 2, 1];
const newFirstNumber = 4;

// => [ 4, 3, 2, 1 ]
[newFirstNumber].concat(numbers);

// => [ 3, 2, 1, 4 ]
numbers.concat(newFirstNumber);
```

If you want to avoid mutating your original array, you can use concat.

JavaScript Set

Create Set

```
// Empty Set Object
const emptySet = new Set();

// Set Object with values
const setObj = new Set([1, true, "hi"]);
```

Add

```
const emptySet = new Set();

// add values
emptySet.add("a"); // 'a'
emptySet.add(1); // 'a', 1
emptySet.add(true); // 'a', 1, true
emptySet.add("a"); // 'a', 1, true
```

Delete

```
const emptySet = new Set([1, true, "a"]);

// delete values
emptySet.delete("a"); // 1, true
emptySet.delete(true); // 1
emptySet.delete(1); //
```

Has

```
const setObj = new Set([1, true, "a"]);

// returns true or false
setObj.has("a"); // true
setObj.has(1); // true
setObj.has(false); // false
```

Clear

```
const setObj = new Set([1, true, "a"]);

// clears the set
console.log(setObj); // 1, true, 'a'
setObj.clear(); //
```

Size

```
const setObj = new Set([1, true, "a"]);

console.log(setObj.size); // 3
```

```
const setObj = new Set([1, true, "a"]);

setObj.forEach(function (value) {
  console.log(value);
});

// 1
// true
// 'a'
```

JavaScript Loops

```
while (condition) {
  // code block to be executed
}

let i = 0;
while (i < 5) {
  console.log(i);
  i++;
}
```

```
const fruits = ["apple", "orange", "banana"];

for (let i = fruits.length - 1; i >= 0; i--) {
  console.log(`${i}. ${fruits[i]}`);
}

// => 2. banana
// => 1. orange
// => 0. apple
```

Do...While Statement

```
x = 0;
i = 0;

do {
  x = x + i;
  console.log(x);
  i++;
} while (i < 5);
// => 0 1 3 6 10
```

For Loop

```
for (let i = 0; i < 4; i += 1) {
  console.log(i);
}

// => 0, 1, 2, 3
```

Looping Through Arrays

```
for (let i = 0; i < array.length; i++) {
  console.log(array[i]);
}

// => Every item in the array
```

Break

```
for (let i = 0; i < 99; i += 1) {
  if (i > 5) {
    break;
  }
  console.log(i);
}

// => 0 1 2 3 4 5
```


Continue

```
for (i = 0; i < 10; i++) {  
  if (i === 3) {  
    continue;  
  }  
  text += "The number is " + i + "<br>";  
}
```

Nested

```
for (let i = 0; i < 2; i += 1) {  
  for (let j = 0; j < 3; j += 1) {  
    console.log(`${i}-${j}`);  
  }  
}
```

for...in loop

```
const fruits = ["apple", "orange", "banana"];  
  
for (let index in fruits) {  
  console.log(index);  
}  
// => 0  
// => 1  
// => 2
```

for...of loop

```
const fruits = ["apple", "orange", "banana"];  
  
for (let fruit of fruits) {  
  console.log(fruit);  
}  
// => apple  
// => orange  
// => banana
```

JavaScript Iterators

Functions Assigned to Variables

```
let plusFive = (number) => {  
  return number + 5;  
};  
// f is assigned the value of plusFive  
let f = plusFive;  
  
plusFive(3); // 8  
// Since f has a function value, it can be invoked.  
f(9); // 14
```

Callback Functions

```
const isEven = (n) => {  
  return n % 2 == 0;  
};  
  
let printMsg = (evenFunc, num) => {  
  const isNumEven = evenFunc(num);  
  console.log(`${num} is an even number: ${isNumEven}.`);  
};  
  
// Pass in isEven as the callback function  
printMsg(isEven, 4);  
// => The number 4 is an even number: True.
```

Array.reduce()

```
const numbers = [1, 2, 3, 4];  
  
const sum = numbers.reduce((accumulator, curVal) => {  
  return accumulator + curVal;  
});  
  
console.log(sum); // 10
```

Array.map()

```
const members = ["Taylor", "Donald", "Don", "Natasha", "Bobby"];

const announcements = members.map((member) => {
  return member + " joined the contest.";
});

console.log(announcements);
```

Array.forEach()

```
const numbers = [28, 77, 45, 99, 27];

numbers.forEach((number) => {
  console.log(number);
});
```

Array.filter()

```
const randomNumbers = [4, 11, 42, 14, 39];
const filteredArray = randomNumbers.filter((n) => {
  return n > 5;
});
```

JavaScript Objects

Accessing Properties

```
const apple = {
  color: "Green",
  price: { bulk: "$3/kg", smallQty: "$4/kg" },
};

console.log(apple.color); // => Green
console.log(apple.price.bulk); // => $3/kg
```

Naming Properties

```
// Example of invalid key names
const trainSchedule = {
  // Invalid because of the space between words.
  platform num: 10,
  // Expressions cannot be keys.
  40 - 10 + 2: 30,
  // A + sign is invalid unless it is enclosed in quotations.
  +compartment: 'C'
}
```

Non-existent properties

```
const classElection = {
  date: "January 12",
};

console.log(classElection.place); // undefined
```

Mutable

```
const student = {
  name: "Sheldon",
  score: 100,
  grade: "A",
};

console.log(student);
// { name: 'Sheldon', score: 100, grade: 'A' }

delete student.score;
student.grade = "F";
console.log(student);
// { name: 'Sheldon', grade: 'F' }

student = {};
// TypeError: Assignment to constant variable.
```

```
const person = {  
  name: "Tom",  
  age: "22",  
};  
const { name, age } = person;  
console.log(name); // 'Tom'  
console.log(age); // '22'
```

```
const person = {  
  firstName: "Matilda",  
  age: 27,  
  hobby: "knitting",  
  goal: "learning JavaScript",  
};  
  
delete person.hobby; // or delete person[hobby];  
  
console.log(person);  
/*  
{  
  firstName: "Matilda"  
  age: 27  
  goal: "learning JavaScript"  
}  
*/
```

Objects as arguments

```
const origNum = 8;
const origObj = { color: "blue" };

const changeItUp = (num, obj) => {
  num = 7;
  obj.color = "red";
};

changeItUp(origNum, origObj);

// Will output 8 since integers are passed by value.
console.log(origNum);

// Will output 'red' since objects are passed
// by reference and are therefore mutable.
console.log(origObj.color);
```

Shorthand object creation

```
const activity = "Surfing";
const beach = { activity };
console.log(beach); // { activity: 'Surfing' }
```

this Keyword

```
const cat = {
  name: "Pipey",
  age: 8,
  whatName() {
    return this.name;
  },
};
console.log(cat.whatName()); // => Pipey
```

Factory functions

```
// A factory function that accepts 'name',  
// 'age', and 'breed' parameters to return  
// a customized dog object.  
const dogFactory = (name, age, breed) => {  
  return {  
    name: name,  
    age: age,  
    breed: breed,  
    bark() {  
      console.log("Woof!");  
    },  
  };  
};
```

Object methods

```
const engine = {  
  // method shorthand, with one argument  
  start(adverb) {  
    console.log(`The engine starts up ${adverb}...`);  
  },  
  // anonymous arrow function expression with no arguments  
  sputter: () => {  
    console.log("The engine sputters...");  
  },  
};  
  
engine.start("noisily");  
engine.sputter();
```

```
const myCat = {  
  _name: "Dottie",  
  get name() {  
    return this._name;  
  },  
  set name(newName) {  
    this._name = newName;  
  },  
};  
  
// Reference invokes the getter  
console.log(myCat.name);  
  
// Assignment invokes the setter  
myCat.name = "Yankee";
```

JavaScript Classes


```
class Dog {
  constructor(name) {
    this._name = name;
  }

  introduce() {
    console.log("This is " + this._name + " !");
  }

  // A static method
  static bark() {
    console.log("Woof!");
  }
}

const myDog = new Dog("Buster");
myDog.introduce();

// Calling the static method
Dog.bark();
```

```
class Song {
  constructor() {
    this.title;
    this.author;
  }

  play() {
    console.log("Song playing!");
  }
}

const mySong = new Song();
mySong.play();
```

Class Constructor

```
class Song {  
  constructor(title, artist) {  
    this.title = title;  
    this.artist = artist;  
  }  
}  
  
const mySong = new Song("Bohemian Rhapsody", "Queen");  
console.log(mySong.title);
```

Class Methods

```
class Song {  
  play() {  
    console.log("Playing!");  
  }  
  
  stop() {  
    console.log("Stopping!");  
  }  
}
```

```
// Parent class
class Media {
  constructor(info) {
    this.publishDate = info.publishDate;
    this.name = info.name;
  }
}

// Child class
class Song extends Media {
  constructor(songData) {
    super(songData);
    this.artist = songData.artist;
  }
}

const mySong = new Song({
  artist: "Queen",
  name: "Bohemian Rhapsody",
  publishDate: 1975,
});
```

JavaScript Modules

```
// myMath.js

// Default export
export default function add(x, y) {
  return x + y;
}

// Normal export
export function subtract(x, y) {
  return x - y;
}

// Multiple exports
function multiply(x, y) {
  return x * y;
}
function duplicate(x) {
  return x * 2;
}
export { multiply, duplicate };
```

```
// main.js
import add, { subtract, multiply, duplicate } from './myMath.js';

console.log(add(6, 2)); // 8
console.log(subtract(6, 2)) // 4
console.log(multiply(6, 2)); // 12
console.log(duplicate(5)) // 10

// index.html
<script type="module" src="main.js"></script>
```

```
// myMath.js

function add(x, y) {
  return x + y;
}
function subtract(x, y) {
  return x - y;
}
function multiply(x, y) {
  return x * y;
}
function duplicate(x) {
  return x * 2;
}

// Multiple exports in node.js
module.exports = {
  add,
  subtract,
  multiply,
  duplicate,
};
```

```
// main.js
const myMath = require("./myMath.js");

console.log(myMath.add(6, 2)); // 8
console.log(myMath.subtract(6, 2)); // 4
console.log(myMath.multiply(6, 2)); // 12
console.log(myMath.duplicate(5)); // 10
```

JavaScript Promises

Promise states

```
const promise = new Promise((resolve, reject) => {
  const res = true;
  // An asynchronous operation.
  if (res) {
    resolve("Resolved!");
  } else {
    reject(Error("Error"));
  }
});

promise.then(
  (res) => console.log(res),
  (err) => console.error(err),
);
```

Executor function

```
const executorFn = (resolve, reject) => {
  resolve("Resolved!");
};

const promise = new Promise(executorFn);
```

setTimeout()

```
const loginAlert = () => {
  console.log("Login");
};

setTimeout(loginAlert, 6000);
```

```
const promise = new Promise((resolve, reject) => {
  setTimeout(() => {
    resolve("Result");
  }, 200);
});

promise.then(
  (res) => {
    console.log(res);
  },
  (err) => {
    console.error(err);
  },
);
```

```
const promise = new Promise((resolve, reject) => {
  setTimeout(() => {
    reject(Error("Promise Rejected Unconditionally."));
  }, 1000);
});

promise.then((res) => {
  console.log(value);
});

promise.catch((err) => {
  console.error(err);
});
```

```
const promise1 = new Promise((resolve, reject) => {
  setTimeout(() => {
    resolve(3);
  }, 300);
});
const promise2 = new Promise((resolve, reject) => {
  setTimeout(() => {
    resolve(2);
  }, 200);
});

Promise.all([promise1, promise2]).then((res) => {
  console.log(res[0]);
  console.log(res[1]);
});
```

```
const promise = new Promise((resolve, reject) => {
  setTimeout(() => {
    resolve("*");
  }, 1000);
});

const twoStars = (star) => {
  return star + star;
};

const oneDot = (star) => {
  return star + ".";
};

const print = (val) => {
  console.log(val);
};

// Chaining them all together
promise.then(twoStars).then(oneDot).then(print);
```



```
const executorFn = (resolve, reject) => {
  console.log("The executor function of the promise!");
};

const promise = new Promise(executorFn);
```

```
const promise = new Promise((resolve) => setTimeout(() => resolve("dAlan'

promise
  .then((res) => {
    return res === "Alan" ? Promise.resolve("Hey Alan!") : Promise.reject
  })
  .then(
    (res) => {
      console.log(res);
    },
    (err) => {
      console.error(err);
    },
  );
```

```
const mock = (success, timeout = 1000) => {
  return new Promise((resolve, reject) => {
    setTimeout(() => {
      if (success) {
        resolve({ status: 200, data: {} });
      } else {
        reject({ message: "Error" });
      }
    }, timeout);
  });
};

const someEvent = async () => {
  try {
    await mock(true, 1000);
  } catch (e) {
    console.log(e.message);
  }
};
```

JavaScript Async-Await

Asynchronous

```
function helloWorld() {
  return new Promise((resolve) => {
    setTimeout(() => {
      resolve("Hello World!");
    }, 2000);
  });
}

const msg = async function () {
  //Async Function Expression
  const msg = await helloWorld();
  console.log("Message:", msg);
};

const msg1 = async () => {
  //Async Arrow Function
  const msg = await helloWorld();
  console.log("Message:", msg);
};

msg(); // Message: Hello World! <-- after 2 seconds
msg1(); // Message: Hello World! <-- after 2 seconds
```

Resolving Promises

```
let pro1 = Promise.resolve(5);
let pro2 = 44;
let pro3 = new Promise(function (resolve, reject) {
  setTimeout(resolve, 100, "foo");
});

Promise.all([pro1, pro2, pro3]).then(function (values) {
  console.log(values);
});
// expected => Array [5, 44, "foo"]
```

```
function helloWorld() {
  return new Promise((resolve) => {
    setTimeout(() => {
      resolve("Hello World!");
    }, 2000);
  });
}

async function msg() {
  const msg = await helloWorld();
  console.log("Message:", msg);
}

msg(); // Message: Hello World! <-- after 2 seconds
```

```
let json = '{ "age": 30 }'; // incomplete data

try {
  let user = JSON.parse(json); // <-- no errors
  console.log(user.name); // no name!
} catch (e) {
  console.error("Invalid JSON data!");
}
```

```
function helloWorld() {
  return new Promise((resolve) => {
    setTimeout(() => {
      resolve("Hello World!");
    }, 2000);
  });
}

async function msg() {
  const msg = await helloWorld();
  console.log("Message:", msg);
}

msg(); // Message: Hello World! <-- after 2 seconds
```

JavaScript Requests

JSON

```
const jsonObj = {  
  "name": "Rick",  
  "id": "11A",  
  "level": 4  
};
```

Also see: [JSON cheatsheet](#)

XMLHttpRequest

```
const xhr = new XMLHttpRequest();  
xhr.open("GET", "mysite.com/getjson");
```

XMLHttpRequest is a browser-level API that enables the client to script data transfers via JavaScript, NOT part of the JavaScript language.

GET

```
const req = new XMLHttpRequest();  
req.responseType = "json";  
req.open("GET", "/getdata?id=65");  
req.onload = () => {  
  console.log(xhr.response);  
};  
  
req.send();
```

POST

```
const data = {
  fish: "Salmon",
  weight: "1.5 KG",
  units: 5,
};
const xhr = new XMLHttpRequest();
xhr.open("POST", "/inventory/add");
xhr.responseType = "json";
xhr.send(JSON.stringify(data));

xhr.onload = () => {
  console.log(xhr.response);
};
```

fetch api

```
fetch(url, {
  method: 'POST',
  headers: {
    'Content-type': 'application/json',
    'apikey': apiKey
  },
  body: data
}).then(response => {
  if (response.ok) {
    return response.json();
  }
  throw new Error('Request failed!');
}, networkError => {
  console.log(networkError.message)
})
}
```

JSON Formatted

```
fetch("url-that-returns-JSON")
  .then((response) => response.json())
  .then((jsonResponse) => {
    console.log(jsonResponse);
  });
```

```
fetch('url')
  .then(
    response => {
      console.log(response);
    },
    rejection => {
      console.error(rejection.message);
    }
  );
```

```
fetch("https://api-xxx.com/endpoint", {
  method: "POST",
  body: JSON.stringify({ id: "200" }),
})
  .then(
    (response) => {
      if (response.ok) {
        return response.json();
      }
      throw new Error("Request failed!");
    },
    (networkError) => {
      console.log(networkError.message);
    },
  )
  .then((jsonResponse) => {
    console.log(jsonResponse);
  });
```

```
const getSuggestions = async () => {  
  const wordQuery = inputField.value;  
  const endpoint = `${url}${queryParams}${wordQuery}`;  
  try {  
    const response = await fetch(endpoint, { cache: "no-cache" });  
    if (response.ok) {  
      const jsonResponse = await response.json();  
    }  
  } catch (error) {  
    console.log(error);  
  }  
};
```

Related Cheatsheet

[jQuery Cheatsheet](#)
Quick Reference

[HTML Canvas Cheatsheet](#)
Quick Reference

[CSS 3 Cheatsheet](#)
Quick Reference

[Django Cheatsheet](#)
Quick Reference

Recent Cheatsheet

[Unreal Engine Cheatsheet](#)
Quick Reference

[OCaml Cheatsheet](#)
Quick Reference

[Unity Shader Graph Cheatsheet](#)
Quick Reference

[Pandas Cheatsheet](#)
Quick Reference