Getting Started

This getting started describes how to install, load, and use math.js.

Install

Math.js can be installed using various package managers like npm, or by just downloading the library from the website: https://mathjs.org/download.html.

To install via npm, run:

```
npm install mathjs
```

Other ways to install math.js are described on the website.

Load

Math.js can be used in node.js and in the browser. The library must be loaded and instantiated. When creating an instance, one can optionally provide configuration options as described in Configuration.

ES6 modules

Load math.js using ES6 import:

```
// load math.js
import * as math from 'mathjs'

// use math.js
math.sqrt(-4) // 2i
```

Node.js

Load math.js in node.js:

```
// load math.js
const math = require('mathjs')

// use math.js
math.sqrt(-4) // 2i
```

Browser

Math.js can be loaded as a regular JavaScript file in the browser, use the global variable `math` to access the libary once loaded:

```
<!DOCTYPE HTML>
<html>
<head>
  <script src="math.js" type="text/javascript"></script>
</head>
<body>
  <script type="text/javascript">
    // use the math.js libary
    math.sqrt(-4) // 2i
  </script>
</body>
</html>
```

If support for old browsers (Internet Explorer 8 and older) is required, the es5-shim library must be loaded as well.

Require.js

Load math.js in the browser using require.js:

```
require.config({
  paths: {
    mathjs: 'path/to/mathjs',
  }
})
require(['mathjs'], function (math) {
  // use math.js
  math.sqrt(-4) // 2i
})
```

Use

Math.js can be used similar to JavaScript's built-in Math library. Besides that, math.js can evaluate expressions (see Expressions) and supports chaining (see Chaining).

The example code below shows how to use math.js. More examples can be found in the section Examples.

```
// functions and constants
math.round(math.e, 3)            // 2.718
math.atan2(3, -3) / math.pi      // 0.75
math.log(10000, 10)              // 4
math.sqrt(-4)                    // 2i
math.pow([[-1, 2], [3, 1]], 2)   // [[7, 0], [0, 7]]

// expressions
math.eval('12 / (2.3 + 0.7)')    // 4
math.eval('12.7 cm to inch')     // 5 inch
math.eval('sin(45 deg) ^ 2')     // 0.5
```

```
math.eval('9 / 3 + 2i')          // 3 + 2i
math.eval('det([-1, 2; 3, 1])')  // -7

// chained operations
math.chain(3)
    .add(4)
    .multiply(2)
    .done() // 14
```

Next

To learn more about math.js, check out the available documentation and examples:

- Documentation
- Examples