## Arrow Function Expressions

based on MDN web docs
(Arrow Function Expressions)

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## **Arrow Function Expressions**

Two factors influenced the introduction of arrow functions:

- the need for shorter functions
- the behavior of the this keyword

## Arrows: Shorter Functions

The following code portions are equivalent:

```
const elements = [
  "Hydrogen",
  "Helium",
  "Lithium",
  "Beryllium"
];
```

```
returns [8, 6, 7, 9]
elements.map(function(element) {
                                                                when elements is the
  return element.length;
                                                                array on the left
});
                                                               the function above can
elements.map((element) => {
                                                                be rewritten with the
  return element.length;
                                                                arrow function here
});
                                                                when there is only one
elements.map(element => {
                                                                parameter, we can
  return element.length;
                                                                remove the parens
});
                                                            when the only statement is
elements.map(element => element.length);
                                                             a return, we can remove the
                                                             return and the curly braces
```

## Arrows: this keyword

Before arrow functions, every new function defined its own this value based on how the function was called.

An array function does not have its own *this*, so the *this* value of the enclosing lexical scope is used.