**Kelvin Weather**

Deep in his mountain-side meteorology lab, the mad scientist Kelvin has mastered weather prediction.

Recently, Kelvin began publishing his weather forecasts on his website. However there’s a problem: All of his forecasts describe the temperature in [Kelvin](https://en.wikipedia.org/wiki/Kelvin).

With our knowledge of JavaScript, let’s convert Kelvin to Celsius, then to Fahrenheit.

For example, 283 K converts to 10 °C which converts to 50 °F.

If you get stuck during this project or would like to see an experienced developer work through it, click “**Get Help**“ to see a **project walkthrough video**.

**Tasks**

**12/12Complete**

Mark the tasks as complete by checking them off

**1.**

The forecast today is 293 Kelvin. To start, create a variable named kelvin, and set it equal to 293.

The value saved to kelvin will stay constant. Choose the variable type with this in mind.

Hint

Here’s how your code should look:

const kelvin = 293;

**2.**

Write a comment above that explains this line of code.

Hint

Add single line comments with //.

**3.**

Celsius is similar to Kelvin — the only difference is that Celsius is 273 degrees less than Kelvin.

Let’s convert Kelvin to Celsius by subtracting 273 from the kelvin variable. Store the result in another variable, named celsius.

Hint

Here’s how your code should look:

const celsius = kelvin - 273;

**4.**

Write a comment above that explains this line of code.

**5.**

Use this equation to calculate Fahrenheit, then store the answer in a variable named fahrenheit.

*Fahrenheit = Celsius \* (9/5) + 32*

In the next step we will round the number saved to fahrenheit. Choose the variable type that allows you to change its value.

Hint

Use the provided formula to assign the correct value to fahrenheit, like so:

let fahrenheit = celsius \* (9 / 5) + 32;

**6.**

Write a comment above that explains this line of code.

**7.**

When you convert from Celsius to Fahrenheit, you often get a decimal number.

Use the .floor() method from the built-in Math object to round down the Fahrenheit temperature. Save the result to the fahrenheit variable.

Stuck? Get a hint

**8.**

Write a comment above that explains this line of code.

**9.**

Use console.log and string interpolation to log the temperature in fahrenheit to the console as follows:

The temperature is TEMPERATURE degrees Fahrenheit.

Use string interpolation to replace TEMPERATURE with the value saved to fahrenheit.

Hint

To interpolate the string correctly, your code should look like:

console.log(`The temperature is ${fahrenheit} degrees Fahrenheit.`);

**10.**

Run your program to see your results!

If you want to check your work, open the hint.

Hint

293 Kelvin is about 68 degrees Fahrenheit.

**11.**

By using variables, your program should work for any Kelvin temperature — just change the value of kelvin and run the program again.

What’s 0 Kelvin in Fahrenheit?

Hint

You’ll need to go back to the top of your program and set kelvin to 0.

const kelvin = 0;

0 Kelvin is equivalent to -460 degrees Fahrenheit!

**12.**

Great work! Kelvin can now publish his forecasts in Celsius and Fahrenheit.

If you’d like extra practice, try this:

* Convert celsius to the [Newton](https://en.wikipedia.org/wiki/Newton_scale) scale using the equation below

*Newton = Celsius \* (33/100)*

* Round down the Newton temperature using the .floor() method
* Use console.log and string interpolation to log the temperature in newton to the console

Hint

// Convert to Newton

let newton = celsius \* (33 / 100);

// Round down

newton = Math.floor(newton);

console.log(`The temperature is ${newton} degrees Newton.`);