Codeacademy Sleep Debt Calculator
Coding Challenge

Problem: Determine how many hours of sleep you get each night of the week and work out how many more hours you need to have a good nights sleep.

Step 1
Implement a function where we can store the amount of nights rest we got per night.

```javascript
//Sleep Debt Calculator
const getSleepHours = function (day) {
switch (day) {
  case "Monday":
    return 1;
    break;
  case "Tuesday":
    return 2;
    break;
  case "Wednesday":
    return 3;
    break;
  case "Thursday":
    return 4;
    break;
  case "Friday":
    return 5;
    break;
  case "Saturday":
    return 6;
    break;
  case "Sunday":
    return 7;
    break;
}
```

```
} ;
```

Here is the code. We have used a switch statement in order to return a number when a day of the week is called. Note that the parameter for our function has been set to day. The switch statement will compare it's cases to the parameter in our function; 'day'.
If we type: console.log(getSleepHours("Tuesday")); this code will return the number 2.
The code is working accurately.

Step 2

We now need to consider; how many hours we actually slept. How many sleep hours we would have liked to sleep… and then calculate if we accrued any sleep debt.
To begin, we can create a new function named getActualSleepHours that takes no parameters.
For this we can use a concise body arrow function with zero parameters;

```javascript
const getActualSleepHours = () => {

};
```

This function is going to add up all the days of the week. How do we do this? We simply call the function we made earlier and implement the days of the week.

```javascript
const getActualSleepHours = () => {

    return getSleepHours("Monday") + getSleepHours("Tuesday");

};
console.log(getActualSleepHours());
```

In this example we have created a function that has zero parameters. We are not going to call this function and implement any conditions that we want to compare. In the code block, we have called our other function from earlier, in this instance we have only called the function with the Monday and Tuesday parameters. Our Console.log will return the number '3' as this is '1' + '2'. Now that we can see the code works we can add the remaining days of the week.

```javascript
//Function for Actual Sleep Hours
const getActualSleepHours = () => {

    return getSleepHours("Monday") + getSleepHours("Tuesday") +

getSleepHours("Wednesday") + getSleepHours("Thursday") +

getSleepHours("Friday") + getSleepHours("Saturday") +

getSleepHours("Sunday") ;

};
console.log(`You got a total of ${getActualSleepHours()} hours sleep

this week.`) ;
```

Here is our code block. When we call the function the number returned is 28. The code works.

Step 3

We now need a function which we can use to compare our values.

```javascript
//Calculate Sleep Debt Function

const calculateSleepDebt = function() {

    const actualSleepHours = getActualSleepHours();

    const idealSleepHours = getIdealHoursSleep();

    if (actualSleepHours === idealSleepHours) {

        return 'Right amount of sleep.'

    } else if (actualSleepHours > idealSleepHours) {

        return `You slept for ${actualSleepHours - idealSleepHours}
hours more than necessary.  Well done!`

    } else if (actualSleepHours < idealSleepHours) {

        return `You did not sleep enough!  You need to sleep
${idealSleepHours - actualSleepHours} hours more a week!`;

    }
}
console.log(calculateSleepDebt());
```

Here we have created two new variables; actualSleepHours and idealSleepHours. We can then use these variables in a simple if/else statement.

Final Code Block

```javascript
'use strict'

//Sleep Debt Calculator
const getSleepHours = function (day) {
switch (day) {
  case "Monday":
    return 8;
    break;
  case "Tuesday":
    return 8;
    break;
  case "Wednesday":
    return 8;
    break;
  case "Thursday":
    return 8;
    break;
  case "Friday":
    return 8;
    break;
  case "Saturday":
    return 8;
    break;
  case "Sunday":
    return 10;
    break;
}
} ;

//Function for Actual Sleep Hours
```

```javascript
const getActualSleepHours = () => {
    return getSleepHours("Monday") + getSleepHours("Tuesday") +
getSleepHours("Wednesday") + getSleepHours("Thursday") +
getSleepHours("Friday") + getSleepHours("Saturday") +
getSleepHours("Sunday") ;
};
console.log(`You got a total of ${getActualSleepHours()} hours sleep this
week.`) ;


//Function for Ideal Sleep Hours
const getIdealHoursSleep = () => {
    let idealHours = 8
    return idealHours * 7
};
console.log(`The ideal amount of sleep is ${getIdealHoursSleep()} hours
per week.`) ;


//Calculate Sleep Debt Function
const calculateSleepDebt = function() {
    const actualSleepHours = getActualSleepHours();
    const idealSleepHours = getIdealHoursSleep();
    if (actualSleepHours === idealSleepHours) {
        return 'Right amount of sleep.'
    } else if (actualSleepHours > idealSleepHours) {
        return `You slept for ${actualSleepHours - idealSleepHours} hours
more than necessary.  Well done!`
    } else if (actualSleepHours < idealSleepHours) {
        return `You did not sleep enough!  You need to sleep
${idealSleepHours - actualSleepHours} hours more a week!`;
    }
    }
```

```
console.log(calculateSleepDebt());
```

Extra Challenges

getActualSleepHours() could be implemented without calling getSleepHours(). Re-write the function.

```
//Function for Actual Sleep Hours
const getActualSleepHours = (a, b, c, d, e, f, g) => {
    return a + b + c + d + e + f + g ;
};
console.log(`You got a total of ${getActualSleepHours(1, 2, 3, 4, 5, 6, 7)} hours sleep this week.`) ;
```

Some people need to sleep longer than others. Rewrite getIdealSleepHours() so that you can pass it an argument, like getIdealSleepHours(8).

```
const getIdealHoursSleep = (a) => {
    let idealHours = a
    return idealHours * 7
};
```