Do the Work: Domain and Range

Sometimes you need to convert one value to another in order to be able to use it. For instance, in our project, we need to map temperature anomalies to colors to visualize them. This is a common problem when working with data.

In D3, when we want to convert a value in one set of values (known as the domain) to another set of values (known as the range), we write a scale function. We'll get into a lot more detail about writing a scale function for our temperature anomalies in the next few lessons; in the meantime, practice by doing this exercise to convert dog ages into human years, and human ages into dog years. It's often said that a dog ages 5 years for every human year.

Write two functions, one to convert a dog's age into human years, and another to convert a human's age into dog years. It's important that we use integer values here, so make sure your code produces a year like 1, 2, or 5, not a floating-point value, like 1.4 or 10.2.

```
1. function dogToHuman(dogAge) {
2.   let humanYears = YOUR CODE HERE;
3.   return humanYears;
4. }
5. function humanToDog(humanAge) {
6.   let dogYears = YOUR CODE HERE;
7.   return dogYears;
8. }
```

Test your code with the following tests:

```
1. dogToHuman(3); // should produce 15
2. humanToDog(52); // should produce 10
3. humanToDog(62); // should produce 12
```

This exercise is good practice for the lessons coming up where we'll be writing a function to convert temperature anomaly values to colors.