Challenge 1: Halving a Number

In this challenge, we'll create a function which halves the value of a double.

WE'LL COVER THE FOLLOWING

Problem Statement

You must write the function `halve()` which takes in a `double` pointer and halves the value it points to.

The value should remain half outside the scope of the function as well.

```
*n = 10;
halve(n);
*n == 5 // The value is halved.
```

Solution Review

The trick here is to pass a pointer of the `double` type. Since pointers are always passed by reference, the value which is being pointed to will be changed.

The actual code is a simple line which halves the value. We should be very

careful about what we actually use in the arithmetic operation. An example of problematic code is:

```
n = n / 2;
```

This is dividing the actual address the `n` holds. Here's another example:

```
n = *n / 2;
```

The line above is mixing the address and the value, which is a common mistake when dealing with pointers.