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# Rolling Dice and Flipping coins

We're going to look at stock prices and when we look at their histories they appear random! There's a lot going into the value of a stock price, but one thing we can do is simulate what happens under some general conditions.



One easy model is that of dice. Suppose we roll some dice (with values between 1 and 6). And every time we roll, we add or subtract that value to a running total. How should we decide whether to add or subtract? Let's flip a coin!



We're going to need two python modules in this part:

```
import numpy as np
import matplotlib.pyplot as plt
```

Numpy gives use some tools to deal with random numbers.

Now the coin flip is going to either be a add (heads or 1) or a subtract (tails or -1), so we can implement this with a `lambda` function as follows:

```
flip = lambda: np.random.choice([1, -1])
```

**Try calling `flip()` a bunch of times.**

We'll also need a dice roller. How should we do that? use `randint`

```
dice = lambda: np.random.randint(1,6)
```

**Try calling `dice()` a bunch of times.**