

Practice – Online Mechanics

```
def average_longest_streak(p, n, num_trials):
    """Runs a Monte Carlo simulation with a number of trials
    num_trials that finds the average length of the longest
    streak of heads when a coin is flipped n times."""

    length = 0
    for t in range(num_trials):
        h_times = 0
        h_max = 0
        for f in range(n):
            h = random.random()
            if h < p:
                h_times += 1
                if h_times > h_max:
                    h_max = h_times
            else:
                h_times = 0
        length += h_max
    return length/float(num_trials)
```