**Question 1.2:**

Saving CMG Y 1 Table...

Saving SPY Y 1 Table...

Saving CMG Y 2 Table...

Saving SPY Y 2 Table...

Saving CMG Y 3 Table...

Saving SPY Y 3 Table...

Saving CMG Y 4 Table...

Saving SPY Y 4 Table...

Saving CMG Y 5 Table...

Saving SPY Y 5 Table...

**Question 1.3:**

There are more non-negative weeks than negative weeks for CMG

There are more non-negative weeks than negative weeks for SPY

**Question 1.4:**

There seems to be large fluctuation from year to year and week to week in terms of average return

There doesn't seem to be a clear pattern of whether CMG loses more than it gains

**Question 1.5:**

No. These results change frequently and don't seem to depend on the week of the month

**Question 2.1:**

There doesn't seem to be any consistancy across weeks of the month, no obvious patterns emerge.

**Question 2.2:**

In addition to a lack of patttern within a given year, there doesn't seem to be a pattern from year to year

**Question 2.3:**

Year 1 best week: week 4, worst week: week 1

Year 2 best week: week 1, worst week: week 3

Year 3 best week: week 3, worst week: week 1

Year 4 best week: week 4, worst week: week 2

Year 5 best week: week 1, worst week: week 2

**Question 2.4:**

Yes, these weeks change year to year, the only notable thing is week 4 is never the worst and week 2 is never the best

**Question 3:**

Saving CMG Y 1-5 Table...

Saving SPY Y 1-5 Table...

**Question 3.1:**

CMG aggregate best week: week 1, worst week: week 4

SPY aggregate best week: week 1, worst week: week 3

**Question 3.2:**

CMG and SPY had the same best week, but different worst weeks.

**Question 3.3:**

5.16% of the weeks are outside of the specified range, this is inconsistant with the normality of returns

3.97% of the weeks are outside of the specified range, this is consistant with the normality of returns

**Question 4.1:**

Starting with $100 on the first day, CMG will have $9589085122.04 on the last day

**Question 4.2:**

Starting with $100 on the first day, SPY will have $774123.48 on the last day

**Question 4.3:**

Starting with $100, CMG will reach $176 by day 53

Starting with $100, SPY will reach $176 by day 172

**Question 5.1:**

Starting with $100, using buy and hold CMG will have $466.49 by the end of year 5

Starting with $100, using buy and hold SPY will have $210.87 by the end of year 5

**Question 5.2:**

For both stocks, the oracle was way better at trading than buy and hold. This is due to the exponential growth that occurs from always making the correct trade.

**Question 5.3:**

Saving Q5.3 Table...

**Question 5.4:**

Saving Q5.4 Table...

For CMG, the best month to vacation was October, and the worst month was April

For SPY, the best month to vacation was March, and the worst month was April

**Question 6:**

Saving Q6 Table...

**Question 6.1:**

For both stocks, somewhere between p = 0.5 and 0.6 equals the revenue from buy-and-hold

**Question 6.2:**

For both stocks, there is an exponential increase in end balance as p increased

**Question 7.1:**

Saving Q7 Table...

**Question 7.2:**

For both stocks, you lost more money by being invested in the worst weeks than missing out on the best weeks.

**Question 7.3:**

For all three scenarios, the p value seems to be around 0.9