Suppose that on each of the next 100 business days the stock market has a 1/2 chance of going up and a 1/2 chance of going down, and its behavior one day is independent of its behavior on another day. The table provides a 10 randomly generated simulations of the market for 100 days. Complete parts a through c below.

⊞ Click the icon to view the table of simulation results.

a. What is the longest sequence of consecutive moves up or consecutive moves down that you observe in the first simulation?

The longest sequence has 6 consecutive moves.

b. Use the remaining nine simulations, and record the longest sequence of consecutive moves up or consecutive moves down that you observe. For the 10 runs, summarize the proportion of times that the longest sequence was 1, 2, 3, 4, 5, 6, 7, 8, or more.

Simulation	2	3	4	5	6	7	8	9	10
Longest Run	6	7	5	6	4	9	7	5	7

(Type whole numbers.)

Longest Run	1	2	3	4	5	6	7	8	9 or more
Proportion	0.0	0.0	0.0	0.1	0.2	0.3	0.3	0.0	0.1

(Type integers or decimals rounded to one decimal place as needed.)

c. Based on your findings, explain why if you are a serious investor you should not get too excited if sometime in the next few months you see the stock market go up for five days in a row or go down for five days in a row.

A random sequence of up and down movements is likely to contain runs of 5 or more consecutive movements in the same direction.