

Problems

1. There's no change in the probability of getting another head on the 10th flip: $p = .5$.
2.
 - a. $p = .019$
 - b. $p = .077$
 - c. $p = .308$
 - d. $p = .25$
 - e. $p = .75$
3.
 - a. $p = .20$
 - b. $p = .40$
 - c. $p = .00$
 - d. $p = .87$
 - e. $p = .40$
 - f. $p = .33$
4.
 - a. $p = .50$
 - b. $p = .50$
5.
 - a. $p = .25$
 - b. $p = .75$
 - c. True-false is easier.
6.
 - a. $p = .001$
 - b. $p = .003$
 - c. $p = .006$
 - d. $p = .01$
7.
 - a. $p = .028$
 - b. $p = .25$
 - c. $p = .11$
 - d. $p = .083$
 - e. $p = .17$
 - f. $p = .33$
8.
 - a. $p = .00$
 - b. $p = .13$
 - c. $p = .20$
 - d. $p = .40$
9.
 - a. $p = .00667$
 - b. $p = .0134$
 - c. $p = .0267$
 - d. $p = .0535$
 - e. $p = .000268$
10. $p(3 \text{ heads in } 5 \text{ flips}) = .346$
 $p(4 \text{ heads in } 5 \text{ flips}) = .259$
11.
 - a. $p = .38$
 - b. $p = .538$
 - c. Yes, added information about personality type increases the probability of holding office.
 - d. Extraversion and holding office are related, not independent. Knowing personality type changes the probability of holding office.