

1.
 - a. $P(\text{Plain}) = \frac{10}{30} \approx 0.333$
 - b. $P(\text{Plain}^C) = 1 - \frac{10}{30} = \frac{20}{30} \approx 0.667$
 - c. $P(\text{Peach}) = \frac{3}{30} = 0.10$
 - d. $P(\text{Cinnamon or Brown sugar}) = P(\text{Cinnamon} \cup \text{Brown sugar}) = \frac{13}{30} \approx 0.433$

2.
 - a.

	1	2	3	4	5	6
1	2	3	4	5	6	7
2	3	4	5	6	7	8
3	4	5	6	7	8	9
4	5	6	7	8	9	10
5	6	7	8	9	10	11
6	7	8	9	10	11	12

- b. $\frac{6}{36} \approx 0.167$
 - c. $\frac{10}{36} \approx 0.278$
 - d. $\frac{18}{36} = 0.50$

- e. Answers will vary. Possible answer: getting a sum of 10 and getting a sum of 4.
- f. Yes, each combination of rolls is equally likely to occur.
- g. No, there are more outcomes resulting in a sum of 7, for example, than outcomes resulting in a sum of 12.

3. C, A, B

4.
 - a. 0.89
 - b. 0.59
 - c. Answers will vary. Sample answer: Giving a rating of 2 or lower and giving a rating of 3 or higher; $0.11 + 0.89 = 1$.

5. The sample space does not include 100 outcomes, since there are only 9 writing utensils to choose from for the second selection (the writing utensils are sampled without replacement). Additionally, each outcome in Chloe's sample space is not equally likely, since having picked a pencil first reduces the probability that the second writing utensil is also a pencil, since there is one fewer pencil to choose from.

6. a. $\frac{1}{16} = 0.063$
 b. $\frac{9}{169} = 0.053$
 c. $\frac{1}{169} = 0.0059$
 d. $\frac{1}{4} = 0.25$

7. B

8. A