Name _____ Class _____ Date _____

Chapter 11 Answers

Practice 11-1

1. $\frac{1}{6}, 0.1\overline{6}, 16\frac{2}{3}\%$ **2.** $\frac{1}{2}, 0.5, 50\%$ **3.** $\frac{1}{2}, 0.5, 50\%$

4. $0, 0.0, 0\%$ **5.** $\frac{1}{3}, 0.3\overline{3}, 33\frac{1}{3}\%$ **6.** $1, 1.00, 100\%$

7. $\frac{2}{5}$ **8.** $\frac{3}{5}$ **9.** even chance, $P(\text{blue}) = \frac{3}{6}$ or $\frac{1}{2}$

10. unlikely, $P(\text{drawing a nickel}) = \frac{3}{10}$

11. likely, $P(\text{yellow}) = \frac{10}{12}$ or $\frac{5}{6}$

12. certain, $P(\text{name starting with } H) = 1$

13. $\frac{1}{3}, 0.\overline{3}, 33\frac{1}{3}\%$ **14.** $\frac{1}{9}, 0.\overline{1}, 11\frac{1}{9}\%$

15. $\frac{2}{9}, 0.\overline{2}, 22\frac{2}{9}\%$ **16.** $\frac{2}{3}, 0.\overline{6}, 66\frac{2}{3}\%$

Practice 11-2

1. $\frac{13}{16}$ **2.** $\frac{3}{16}$

3. Sample answer: No; if it is a game of skill, Mirga may be more skilled.

4. $\frac{4}{15}$ **5.** $\frac{2}{15}$ **6.** $\frac{1}{5}$ **7.** $\frac{6}{15}$ **8.** $\frac{7}{10}$ **9.** $\frac{2}{5}$

10. Unfair; $P(\text{even}) = \frac{13}{20}$, $P(\text{odd}) = \frac{7}{20}$. Results favor Player A.

11. Fair; $P(2) = \frac{2}{20}$ or $\frac{1}{10}$, $P(5) = \frac{2}{20}$ or $\frac{1}{10}$. Results are about the same.

Practice 11-3

1. Sample answer: A population is a group of people or other objects about which you want information.

2. Sample answer: A sample is the part of the population you use to make predictions about the population.

3. Sample answer: To predict the number of times an event will occur, multiply the total number of trials by the probability of the event.

4. 3 **5.** 8 **6.** 15 **7.** 24 **8.** 468 customers

9. 24 strings of lights **10.** 187 egg timers

Practice 11-4

1a–b. Check students' work.

2. Sample answer: $\frac{1}{4}$

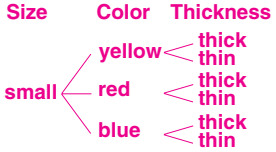
3. 8 coins: 2 dimes, 3 nickels, and 3 pennies

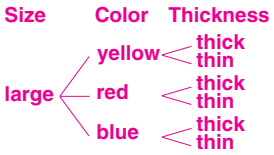
4. 45 handshakes

5. Sample answer: $\frac{5}{12}$

Practice 11-5

1. Check students' diagrams.





2. 12 **3.** 4 **4.** 2 **5.** 6

6. $2 \cdot 3 \cdot 2 = 12$ **7.** 18 **8.** 256 outcomes

9. 288 meals **10.** $\frac{1}{512}$ **11.** $\frac{0}{512}$ or 0 **12.** $\frac{9}{36}$ or $\frac{1}{4}$

Practice 11-6

1.

Ali	Ali	Ben	Ben	Chou	Chou
Ben	Chou	Ali	Chou	Ali	Ben
Chou	Ben	Chou	Ali	Ben	Ali

2. one: bite

BITE	ITEB	TEBI	EBIT
BIET	ITBE	TEIB	EBTI
BTIE	IBTE	TBIE	EITB
BTEI	IBET	TBEI	EIBT
BETI	IETB	TIEB	ETIB
BEIT	IEBT	TIBE	ETBI

3. Check students' diagrams.



4a. Check students' diagrams.



4b. 6 ways **5.** 24 **6.** 120 **7.** 720 **8.** 6

Practice 11-7

1. no **2.** yes **3.** yes **4.** $\frac{1}{16}$ **5.** $\frac{1}{8}$

6. $\frac{1}{4}$ **7.** $\frac{1}{16}$ **8.** $\frac{1}{16}$ **9.** $\frac{1}{8}$

10. Yes; the second spin does not depend on the first.

11. $\frac{1}{216}$ **12.** $\frac{1}{8}$ **13.** $\frac{125}{216}$

14. Samples for "Linda Carpenter"

15. $\frac{1}{5}$ **16.** $\frac{1}{9}$ **17.** $\frac{1}{45}$

Reteaching 11-1

1. $\frac{2}{5}$ **2.** $\frac{2}{7}$ **3.** $\frac{1}{4}$ **4.** $\frac{2}{6}$ or $\frac{1}{3}$ **5.** $\frac{1}{2}$

6. $\frac{3}{5}$ **7.** 0 **8.** $\frac{1}{2}$ **9.** likely

10. certain **11.** unlikely **12.** unlikely

13. impossible **14.** impossible

Reteaching 11-2

1. $\frac{1}{6}$ **2.** $\frac{4}{6}$ or $\frac{2}{3}$

3. No; the probabilities are not close to being the same.

4. $\frac{5}{20}$ or $\frac{1}{4}$ **5.** $\frac{9}{20}$ **6.** $\frac{11}{20}$ **7.** $\frac{12}{20}$ or $\frac{3}{5}$ **8.** $\frac{7}{20}$

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