Name _____ Date _____ Class _____

LESSON 11-2

Practice A

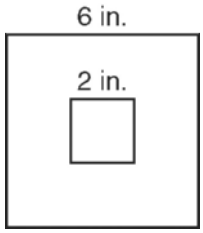
Theoretical and Experimental Probability

Answer each question.

1. How many possible outcomes are there from tossing two number cubes labeled 1–6? _____
2. Describe the sample space for a spinner with four equal sections of blue, red, green, and yellow. _____
3. How likely is it that an outcome with a probability of 1 will occur? _____
4. How likely is it that an outcome with a probability of 0 will occur? _____

Solve.

5. A farmer has four sheepdogs and three beagles. If he randomly chooses a dog to accompany him on a walk, what is the probability of him taking a walk with a sheepdog? _____
6. Gordon spins a spinner with equal-sized sections numbered 1–6. In one spin, what is the likelihood that the spinner will stop on a 1 or a 5? _____
7. Oak trees shade 30% of the Fitzgeralds' backyard. What is the probability that someone standing at a random point in the backyard will NOT be in the shade? _____
8. Find the probability that a point chosen at random inside the larger square shown here will also fall inside the smaller square.



_____

The table below shows the results of pulling one marble from a bag of marbles, recording its color, and replacing it in the bag.

Marble Color	Yellow	Red	Green
Times Pulled	53	17	30

Find the experimental probability of each event.

9. Choosing a yellow marble _____
10. NOT choosing a red marble _____
11. Choosing either a red or a green marble _____
12. Which color marble is probably present in greatest number in the bag? _____

LESSON 11-2

Practice A

1. 36 outcomes
2. The sample space is blue, red, green, yellow.
3. Certain
4. Impossible
5. $\frac{4}{7}$
6. $\frac{1}{3}$
7. $\frac{7}{10}$
8. $\frac{1}{9}$
9. $\frac{53}{100}$
10. $\frac{83}{100}$
11. $\frac{47}{100}$
12. Yellow

Practice B

1. $\frac{4}{11}$
2. $\frac{1}{36}$
3. $\frac{1}{15}$
4. a. $\frac{2}{3}$

   b. $\frac{1}{3}$
5. $\frac{1}{35}$
6. $\frac{9}{16}$
7. $\frac{2}{19}$
8. $\frac{12}{19}$
9. $\frac{7}{19}$
10. $\frac{14}{19}$

Practice C

1. $\frac{15}{26}$
2. $\frac{1}{4}$
3. a. $\frac{1}{2}$

   b. $\frac{111}{176}$

   c. $\frac{23}{176}$
4. $\frac{1}{100,000}$
5. $\frac{1}{30,240}$
6. 0
7. $\frac{\pi}{12}$
8. $1-\frac{\pi}{12}$

Reteach

1. a. (2, 1), (1, 2)

   b. $\frac{1}{18}$
2. a. (3, 1), (2, 2), (1, 3)

   b. $\frac{1}{12}$
3. a. (6, 3), (5, 4), (4, 5), (3, 6)

   b. $\frac{1}{9}$
4. a. 55

   b. $\frac{8}{55}$
5. a. 32

   b. $\frac{32}{55}$
6. a. 25

   b. $\frac{5}{11}$

Challenge

1. a. Possible answer: $\frac{17}{25}=0.68$

   b. Possible answer: 16.32 square units

   c 18.85 square units

   d. Increase the number of random points in a simulation. Repeat the simulations a number of times and take the average of the results.
2. The area derived from the simulation will vary but should be close to 50.24 square units.
3. The area derived from the simulation will vary but should be close to 62.8 square units