Name_____Date_____

Theoretical and Experimental Probability
Evaluate – Answer Key

1 Basha's favorite board game has a spinner with nine congruent sections. The spinner has 2 red sections, 3 blue sections, and 4 green sections. What is the probability of Basha spinning a red on her first spin and a blue on her second spin?

A $\dfrac{6}{81}$

B $\dfrac{5}{9}$

C $\dfrac{6}{72}$

D $\dfrac{8}{81}$

---

2 Mark Anthony rolled two six-sided dice. What is the probability he rolled two even numbers?

A $\dfrac{3}{6}$

B $\dfrac{6}{36}$

C $\dfrac{1}{36}$

D $\dfrac{9}{36}$

3 Anastasia has a bag of 10 marbles. The bag contains 5 yellow marbles, 3 purple marbles, and two orange marbles. What is the probability Anastasia pulled a purple marble from the bag, placed it on the table, then pulled a yellow marble from the bag?

A $\frac{15}{100}$

B $\frac{15}{90}$

C $\frac{8}{10}$

D $\frac{9}{90}$

---

4 Rolando flipped a coin twice. What is the probability the coin landed on heads both times?

A $\frac{1}{8}$

B $\frac{1}{2}$

C $\frac{1}{4}$

D $\frac{2}{4}$

5 A movie theater surveyed a random sample of guests to determine which of 2 movie snacks they prefer. The results of the survey are shown below.

- Popcorn is preferred by 28 movie guests
- Candy is preferred by 11 movie guests.

Based on the results of the survey, about how many of 130 guests at a movie can be expected to prefer candy?

A 37

B 93

C 28

D 39

_____

6 Martin has a collection of celebrity autographs. The table shows the number of autographs of each celebrity by category.

Celebrity Autographs

Category	Number
Sports Figure	8
Public Officials	12
TV personalities	6
Authors	4

Martin selects an autograph at random. Based on the information in the table, which statement is true?

A The autograph drawn is more likely to be a sports figure than all other autographs.

B The autograph drawn is 2 times more likely to be a sports figure than an author.

C The autograph drawn is 4 times more likely to be a public official than a sports figure.

D The autograph drawn is 2 times more likely to be a TV personality than an author.