Name: _____ Date: _____

Chapter 2 Review

2.1 Probability Experiments, pages 60-67

1. In a probability experiment, a total of 130 trials were conducted and 64 of them were successful.
- **a)** Write the experimental probability of a successful event, expressed as a fraction, a decimal, and a percent.
- **b)** What is the experimental probability of an unsuccessful event, expressed as a fraction?
- **c)** Do your answers to parts a) and b) add to 1? Why or why not?

2. Two coins were tossed simultaneously and the results are recorded in the table.

Result	Frequency
two heads	57
one head	88
no heads	31

- **a)** How many times were the two coins tossed?
- **b)** How many single coin tosses do the results represent in total?
- **c)** How many heads were recorded in total?
- **d)** Express your answer to part c) as a fraction and as a percent of the total number of coin tosses.

3. A card is chosen from a deck of cards and returned. In a total of 54 trials, 38 red cards were chosen.
- **a)** Write the experimental probability of choosing a red card, expressed as a fraction in lowest terms.
- **b)** Is your answer to part a) expected? Explain why or why not.

2.2 Theoretical Probability, pages 68-75

4. A pencil case holds 3 pens, 5 pencils, 2 highlighters, and 2 markers.
- **a)** What is the probability of randomly selecting a pencil? a pen? a marker or a highlighter?
- **b)** Add your answers to part a). Explain your result.

5. Find the probability of each event.
- **a)** rolling 2 dice and getting a sum of 7 or 11
- **b)** tossing a coin 5 times and getting a tail every time
- **c)** choosing a queen or a red ace from a deck of cards

6. A spinner has 25 equally spaced coloured sections: 8 blue, 2 purple, 10 red, and 5 green. What is the probability that the spinner lands
- **a)** on green?
- **b)** on red or blue?
- **c)** on red, if the 2 purple sections are removed from the spinner?

Name: _____ Date: _____

2.3 Compare Experimental and Theoretical Probabilities, pages 76-85

7. Sonia rolls a die 40 times. On 12 of those rolls, she gets a 5. Is the die "loaded"? Explain.

8. A prize wheel with equal sectors numbered from 0 to 36 is spun 400 times. A prime number is the outcome 125 times.
- **a)** What is the theoretical probability of spinning a prime number?
- **b)** In 400 spins, how many times would you expect a prime number to occur?
- **c)** Compare your answers to parts a) and part b).

9. A card is chosen from a deck of cards, recorded, and then replaced. This is done 75 times and a red card from 5 to 9 is chosen 21 times.
- **a)** What is the theoretical probability of a red card between 5 and 9 being chosen?
- **b)** How many times would you expect this event to happen in 75 trials?
- **c)** Compare your answers to parts a) and part b).

2.4 Interpret Information Involving Probability, pages 86-93

10. A basketball player made 28 of the 54 three-point shots she took in 5 games.
- **a)** How many shots will she make in her next game if she attempts 8 three-point shots?
- **b)** How many shots will she make this season, if she attempts 880 three-point shots this season?
- **c)** What assumptions must you make for your answers to be accurate?

11. A football receiver dropped 16 of the 82 passes that were thrown to him so far this season.
- **a)** What percent of passes did he catch?
- **b)** If 12 passes are thrown to him in the next game, how many would you expect him to catch?
- **c)** What factors might cause your answer to part b) to be incorrect?