Name _____   **Date** _____

Take a Chance—Part 1

DIRECTIONS: You are given a bag of eight quarters containing one eagle quarter (made prior to 1999), five quarters from 1999, and two quarters minted in 2000. Pulling out one quarter at a time and then returning the quarter to the bag, what would be the probability (in fraction form) of choosing:

1. An eagle quarter?

_____

2. A new quarter?

_____

3. A quarter minted in 1999?

_____

4. A quarter minted in 2000?

_____

5. A quarter minted before 2000?

_____

Hint: Remember to reduce fractions.

6. A quarter minted in 2000 or 1999?

_____

7. A quarter minted before 1999?

_____

8. A cent?

_____

9. A quarter?

_____

10. A quarter not minted in 1999?

_____

Fill in the blank with one of the following terms:
Likely, Unlikely, Impossible, Certain

1. The chance of choosing a new quarter:

_____

2. The chance of choosing an eagle quarter:

_____

3. The chance of choosing a quarter:

_____

4. The chance of choosing a cent:

_____

24

Name _____   Date _____

Take a Chance—Part 2

Test Trial—Make a Prediction
> When you flip a coin, what is the probability that
> it will land on heads? On tails?

Now, test your prediction. Toss a quarter 30 times and record how many times
it lands on heads and how many times it lands on tails. For each result, color in a block.
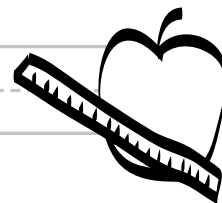
Heads   Tails

Totals: ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Did your prediction come true? Why or why not?

Convert between fractions to decimals to percents in the chart below.

Fraction	Decimal	Percent
		50%
1/5		
	0.75	
3/10		80%

25

A Lesson on Probability

TERMS and CONCEPTS:

- Probability
- Likely
- Unlikely
- Impossible
- Certain

STEPS:

1. Introduce the activity by asking students if they have ever played a game involving chance. What is another name for "chance"? What does the word "probability" mean?

2. Discuss various games and determine if they involve chance or strategy.

3. Discuss terms on board. Define as a class.

4. Pass out bags of quarters (real or paper) and the "Take a Chance" worksheets (pages 24 and 25). Students may work in groups or as a whole class depending on teacher preference. Have students examine the contents of the bags.

5. Review the process for changing fractions to decimals, decimals to percents, and percents to fractions.

6. As a warm-up, have students determine the probability of pulling the eagle quarter out of the bag. Have students write the outcome as a fraction (1/8).

7. Students will complete the "Take a Chance" worksheets (pages 24 and 25).

8. Check worksheet answers for accuracy. Quiz students on concepts learned to verify understanding.

ANSWER KEY:

1. 1/8	6. 7/8	1. Likely
2. 7/8	7. 1/8	2. Unlikely
3. 5/8	8. 0	3. Certain
4. 2/8 or 1/4	9. 8/8 or 1	4. Impossible
5. 6/8 or 3/4	10. 3/8	

ENRICHMENT/EXTENSIONS:

Students can invent a game of chance to play with classmates.

Students can generate a quiz testing the new vocabulary terms/definitions learned in the lesson.