Exploring Probability

Is each game fair? Explain.

1. There are 7 green cubes and 4 orange cubes in a bag. Liz gets 1 point if she pulls a green cube. Rob gets 1 point if he pulls an orange cube.

_____

_____

2. Tim and Lin play a game by tossing a penny. Lin wins if the penny lands on heads. Tim wins if the penny lands on tails.

_____

_____

3. Mira and Ray play a game with a spinner. It is $\frac{1}{2}$ red, $\frac{1}{4}$ green, and $\frac{1}{4}$ blue.

Mira wins if the spinner lands on red.

Ray wins if the spinner lands on green.

_____

_____

Solving Problems About Age

Robbie was born in 1990.
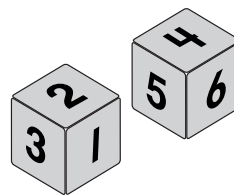His sister Megan was born in 1996.

1. Who is older? _____

2. How many years older is Robbie than his sister? _____ years

3. How old is Robbie now? _____

Monique was born in 1994. She got glasses in
2003. Her brother Marcus was 2 at the time.

4. In what year was Marcus born? _____

5. How old was Monique when Marcus was born? _____

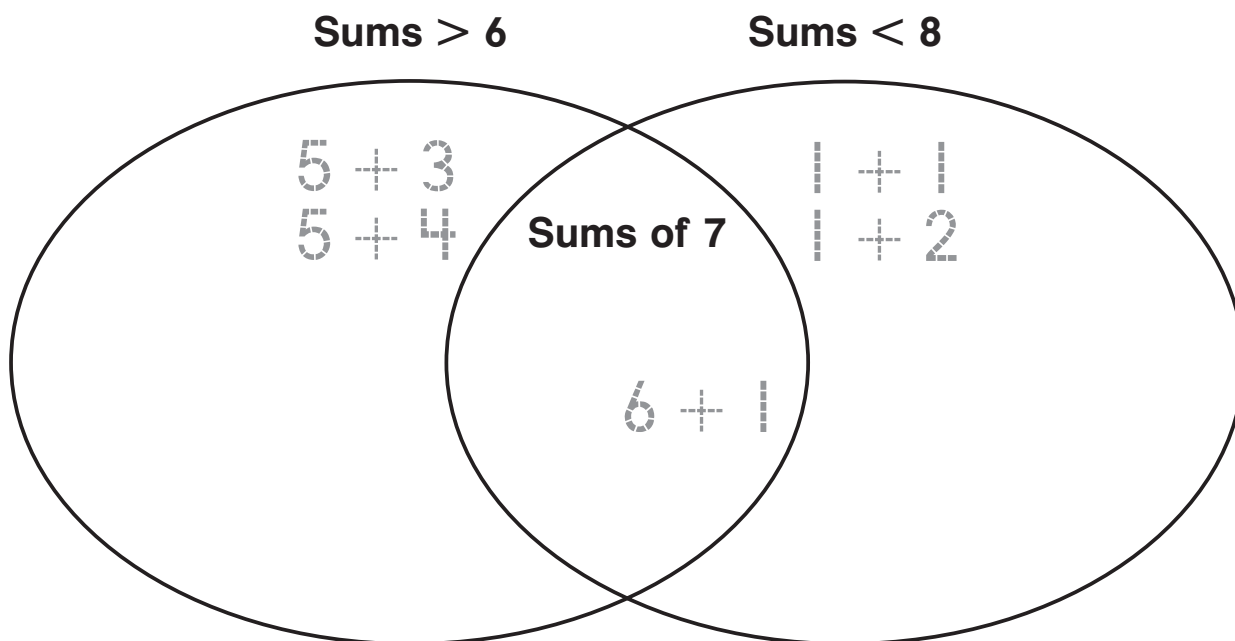**6.** How old was Monique when she got glasses? _____

Tables and Venn Diagrams

1. You have two number cubes with 1 to 6. What are all of the possible addition facts you could make by tossing both cubes?

+	1	2	3	4	5	6
1	1 + 1					
2						
3						
4						
5						
6						

2. Sort the sums using a Venn Diagram.

Sums > 6   **Sums < 8**

5 + 3
5 + 4   **Sums of 7**   1 + 1
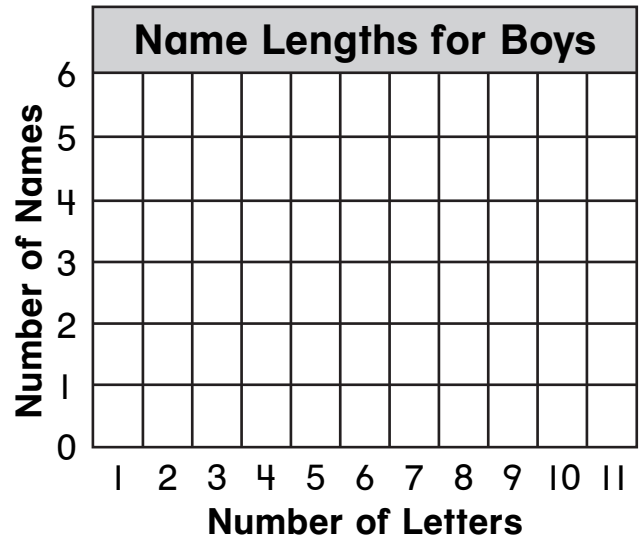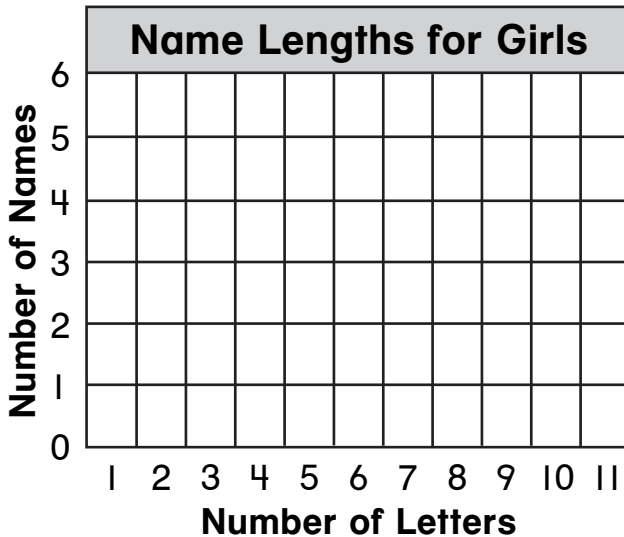   1 + 2

                6 + 1

Making and Using Bar Graphs

These were the most popular baby names in the United States from 1990 to 1999.

Girl Names	
Ashley	Jessica
Amanda	Megan
Brittany	Samantha
Elizabeth	Sarah
Emily	Taylor

Boy Names	
Andrew	Joseph
Christopher	Matthew
Daniel	Michael
Jacob	Nicholas
Joshua	Tyler

1. Make bar graphs for the two lists of names.

Name Lengths for Girls

Number of Names

6
5
4
3
2
1
0

1 2 3 4 5 6 7 8 9 10 11
Number of Letters

Name Lengths for Boys

Number of Names

6
5
4
3
2
1
0

1 2 3 4 5 6 7 8 9 10 11
Number of Letters

2. Which list has the longest name? _____

3. Which list has more names with exactly five letters? _____

4. Write a sentence comparing the lengths of names in the two lists.

_____

_____

Making and Using Pictographs

1. Use the tally table to make a pictograph. Choose
a symbol and make a key.

Muffins Sold at Bake Sale	
Muffin	**Tally**
corn	~~IIII~~ ~~IIII~~ ~~IIII~~ ~~IIII~~
chocolate	~~IIII~~ ~~IIII~~ ~~IIII~~ ~~IIII~~ ~~IIII~~ ~~IIII~~
raspberry	~~IIII~~ ~~IIII~~
lemon	~~IIII~~ ~~IIII~~ ~~IIII~~ ~~IIII~~ ~~IIII~~

Muffins Sold at Bake Sale										
corn										
chocolate										
raspberry										
lemon										

Key: Each _____ **stands for** _____ **muffins.**

Write a number sentence to answer each question.

2. How many fewer lemon than
chocolate muffins were sold? _____

3. How many of the muffins
sold were not chocolate? _____

Graphing Change Over Time

The Olympic Games take place every four years. This table gives winning times for the Olympic event, Women's 10K Cross Country Skiing.

1. Use the data in the table to make a line graph. Show the change over time. Remember to label the graph.

Winning Times for an Olympic Ski Event, 1964–1988	
Year	**Number of Minutes**
1964	40
1968	37
1972	34
1976	30
1980	31
1984	32
1988	31

Year