LESSON 7·1 | **Using a Calculator to Find Patterns**
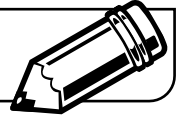
1. Use a calculator to count by 5s starting with the number 102. Color the counts on the grid with a crayon. Look for a pattern.

									100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130

2. Pick a number to count by. Start with a number less than 310. Use your calculator to count. Record your counts on the grid with a crayon.

									300
301	302	303	304	305	306	307	308	309	310
311	312	313	314	315	316	317	318	319	320
321	322	323	324	325	326	327	328	329	330
331	332	333	334	335	336	337	338	339	340
341	342	343	344	345	346	347	348	349	350
351	352	353	354	355	356	357	358	359	360
361	362	363	364	365	366	367	368	369	370

I counted by _____ starting with the number _____.

Here is a pattern that I found: _____

_____

HOME LINK 7·1

Count by 2s, 5s, and 10s

Example:

Count by 2s. Begin at 100. Write your first 10 counts below.

_100_, _102_, _104_, _106_, _108_, _110_, _112_, _114_, _116_, _118_

1. Count by 2s. Begin at 200. Write your first 10 counts below.

_200_, _____, _____, _____, _____, _____, _____, _____, _____, _____

2. Count by 5s. Begin at 500. Write your first 10 counts below.

_____, _____, _____, _____, _____, _____, _____, _____, _____, _____

3. Count by 10s. Begin at 550. Write your first 10 counts below.

_____, _____, _____, _____, _____, _____, _____, _____, _____, _____

Look at your counts. Write about any patterns you find in the counts.

_____

_____

_____

_____

LESSON 7·1

Patterns on a Number Chart

−9	−8	−7	−6	−5
−4	−3	−2	−1	0
1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25
26	27	28	29	30
31	32	33	34	35
36	37	38	39	40

HOME LINK 7·2
Missing Addends

Unit

1. $4 + \underline{\hspace{1cm}} = 10$

   $10 = 3 + \underline{\hspace{1cm}}$

   $\underline{\hspace{1cm}} + 5 = 10$

   $10 = \underline{\hspace{1cm}} + 1$

   $8 + \underline{\hspace{1cm}} = 10$
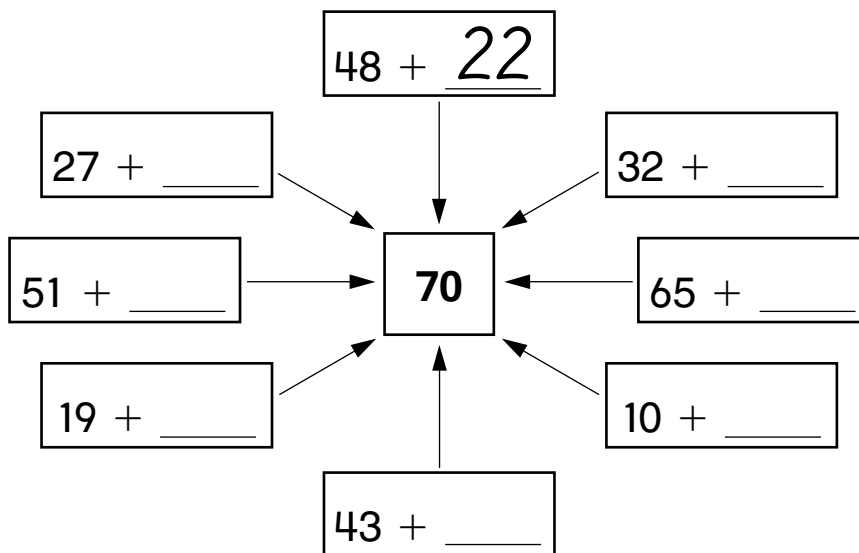
2. $54 + \underline{\hspace{1cm}} = 60$

   $90 = 83 + \underline{\hspace{1cm}}$

   $75 + \underline{\hspace{1cm}} = 80$

   $40 = 31 + \underline{\hspace{1cm}}$

   $\underline{\hspace{1cm}} + 62 = 70$
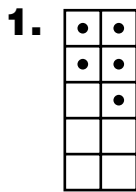
3. Make 70s. Show someone at home how you did it.

$48 + \underline{22}$

$27 + \underline{\hspace{0.8cm}}$ $32 + \underline{\hspace{0.8cm}}$

$51 + \underline{\hspace{0.8cm}}$ **70** $65 + \underline{\hspace{0.8cm}}$

$19 + \underline{\hspace{0.8cm}}$ $10 + \underline{\hspace{0.8cm}}$
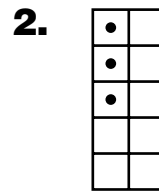
$43 + \underline{\hspace{0.8cm}}$
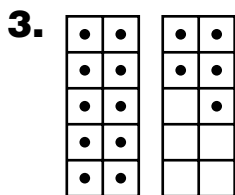
LESSON 7·2 | **Making Multiples of 10**

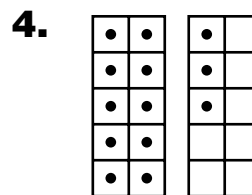For each problem, tell how many dots must be added to fill the ten frames. Write a number model to show what you did.
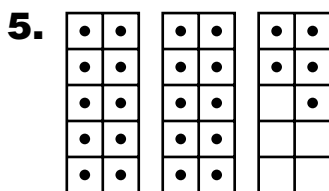
1.
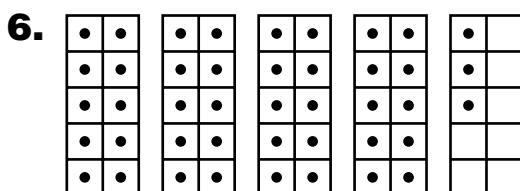
Number model:

_____

2.

Number model:

_____

3.

Number model:

_____

4.

Number model:

_____

5.

Number model: _____

6.

Number model: _____

LESSON 7·3

Basketball Addition

	Points Scored			
	Team 1		Team 2	
	1st Half	2nd Half	1st Half	2nd Half
Player 1				
Player 2				
Player 3				
Player 4				
Player 5				
Team Score				

Point Totals	1st Half	2nd Half	Final
Team 1	_____	_____	_____
Team 2	_____	_____	_____

1. Which team won the first half? _____

By how much? _____ points

2. Which team won the second half? _____

By how much? _____ points

3. Which team won the game? _____

By how much? _____ points

HOME LINK 7·3

Who Scored More Points?

Family Note

In this lesson, your child added three or more 1-digit and 2-digit numbers. As your child completes the problems below, encourage him or her to share the different ways in which the points can be added. Your child might add all the tens first and then add all the ones. For example, $20 + 5 + 4 + 6 = 20 + 15 = 35$. Your child may also look for combinations of numbers that are easier to add. In Game 1, for example, first add 14 and 6 to get 20 and then add 15 to get 35.

Please return this Home Link to school tomorrow.

Do the following for each problem:

◆ Add the points for each team.

◆ Decide which team scored more points. The team with the greater number of points wins the game.

◆ Circle your answer.

Unit
points

1. Game 1

Team A:
$15 + 14 + 6 =$ _____

Team B:
$5 + 13 + 7 =$ _____

Who won?   A   or   B

2. Game 2

Team A:
$12 + 6 + 4 + 8 =$ _____

Team B:
$5 + 10 + 19 + 1 =$ _____

Who won?   A   or   B

3. Game 3

Team A:
$17 + 4 + 5 + 3 =$ _____

Team B:
$2 + 11 + 9 + 18 =$ _____

Who won?   A   or   B

4. Game 4

Team A:
$7 + 4 + 16 + 13 + 5 =$ ____

Team B:
$22 + 9 + 8 + 3 + 17 =$ ____

Who won?   A   or   B

LESSON 7·3 **Addition and Subtraction Puzzles**

Solve these addition and subtraction puzzles.

Example:

SUBTRACT

27	8	*35*
15	3	*18*
12 *5*		17

A D D

1.

SUBTRACT

48	18	___
12	8	___
___ ___		46

A D D

2.

SUBTRACT

22	8	___
14	6	___
___ ___		10

A D D

3.

SUBTRACT

	40	95
28		___
___ ___		59

A D D

Make up addition and subtraction puzzles of your own.

4.

SUBTRACT

		___
		___
___ ___		

A D D

5.

SUBTRACT

		___
		___
___ ___		

A D D

HOME LINK 7·4

Doubles and Halves

1. Write a rule in the rule box. Then complete the table.

in

Rule

out
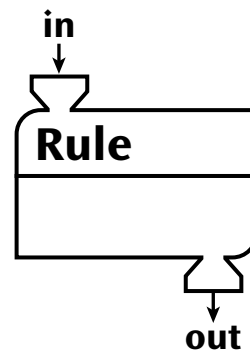
in	out
12	6
50	25
40	
30	
	8
	9

2. Fill in the frames using the rule in the rule box.

Rule
Double

| | 2 | | 8 | | | |
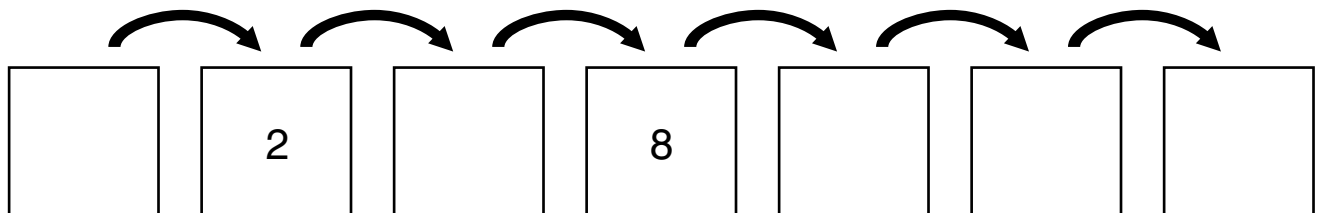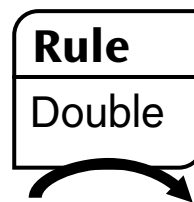
HOME LINK
7·4   **Doubles and Halves** *continued*

3. Fill in the frames using the
rule in the rule box.

Rule
Double

3
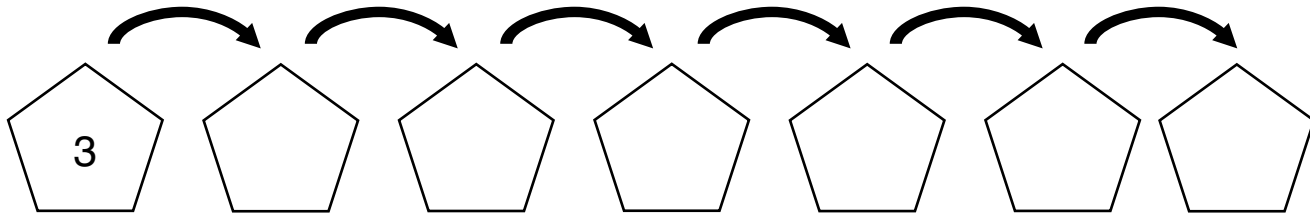
Try This

4. Maria finds 1 penny under her pillow when she wakes up on
Monday morning. On Tuesday, she finds 2 pennies. On
Wednesday, she finds 4 pennies. So, on Wednesday, she has
a total of 7 cents.

On Thursday, Friday, Saturday, and Sunday, Maria finds double
the amount of money she found under her pillow the day before.
How much money does Maria have on Sunday?

_____

Practice

5. $28 - 19 =$ _____

6. $74 - 42 =$ _____

7. $67 - 29 =$ _____

Unit

204

LESSON 7·4 | # Halves and Doubles

For each rectangle with dots:

Circle "yes" if half of the dots are shaded.

Circle "no" if more or less than half of the dots are shaded.

1.

yes   no

2.

yes   no

3.

yes   no

4. Which problem was hardest to solve? Explain your answer.

_____

_____

For each problem, circle the answer that is "double."

Example:	**Answer Choices:**
5.	

Try This

6.	

LESSON 7·4 | **The Budruples**

Remember what you learned about the Wubbles and how they double. There is a different kind of Wubble called a Budruple. It quadruples every night. Use your calculator.

1. On each line, write the number of Budruples after quadrupling.

You started on Friday with one Budruple.

On Saturday, there were _____ Budruples.
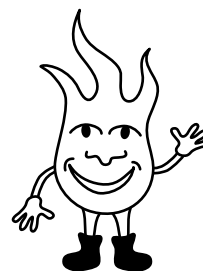
On Sunday, there were _____ Budruples.

On Monday, there were _____ Budruples.

On Tuesday, there were _____ Budruples.

On Wednesday, there were _____ Budruples.

On Thursday, there were _____ Budruples.

On Friday, there were _____ Budruples.

A Budruple

2. On each line, write the number of Budruples after quartering. Remember that "$\frac{1}{4}$ of" means "divide by 4."

There were _____ Budruples.

After Wink 1, there were _____ Budruples.
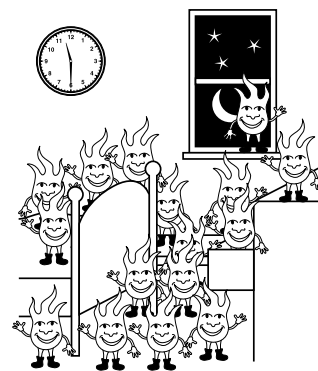
After Wink 2, there were _____ Budruples.

After Wink 3, there were _____ Budruples.

After Wink 4, there were _____ Budruples.

After Wink 5, there were _____ Budruples.

After Wink 6, there were _____ Budruples.

After Wink 7, there was _____ Budruple.

Adapted with permission from *Calculator Mathematics Book 2* by Sheila Sconiers, pp. 10 and 11 (Everyday Learning Corporation, © 1990 by the University of Chicago).

LESSON 7·5

Measuring Weight with a Bath Scale

1. Place books on a bath scale. Try to make a stack of books that weighs about 5 pounds. Lift the stack of books and feel the weight of that stack.

2. Start again. Make a stack of books that weighs about 10 pounds. Then lift the stack and feel the weight.

3. Start again. Make a stack of books that weighs about 15 pounds. Then lift the stack and feel the weight.
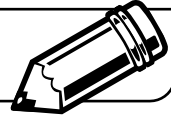
Make a 5-pound stack of books.
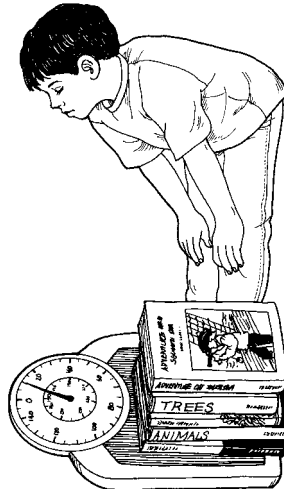
Make a 10-pound stack of books.

Make a 15-pound stack of books.

4. Make a stack of books on the floor. Estimate how much your stack weighs. Weigh the stack and see how close your estimate was.

5. Repeat with other stacks of books that are different sizes.

Are you getting better at estimating weight?

LESSON 7·5 | **Sharing Money**

Work in a small group.

Materials   ☐ $5 bill, $1 bills, quarters, dimes, nickels, pennies

               ☐ half-sheets of paper

At school, 4 children found an envelope. Inside was a $5 bill. They took the envelope to the principal. A week went by and nobody claimed it. The principal returned the money to the children and said that it now belonged to them.
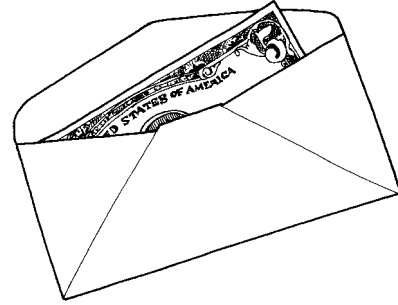
How would you divide $5 so each of the children gets the same amount of money?

1. First, think about what you could do.

   ◆ How could you begin?

   ◆ What could you do next?

2. After you have divided the money, count each person's share. Did each one get the same amount?

3. Write a group report or make a drawing. Tell how you divided the $5 equally among the 4 children.

Follow-Up

◆ Make up your own problems for dividing an amount of money equally among 4 or 5 children.

◆ Write some of your problems on half-sheets of paper for others to solve.

**LESSON 7·5** | **Two-Block Patterns**

Work with a partner.

Materials ☐ Pattern-Block Template

☐ pattern blocks

1. Choose two different pattern-block shapes.

2. Explore. Try to make a pattern using just these two shapes.

   ◆ Do not leave any open spaces in your pattern.

   ◆ Make the pattern so it covers about a quarter of a sheet of paper.

   ◆ Make the pattern so you could continue it forever if you had enough blocks.

3. Use your Pattern-Block Template and crayons to record your pattern on a quarter-sheet of paper.

Example:
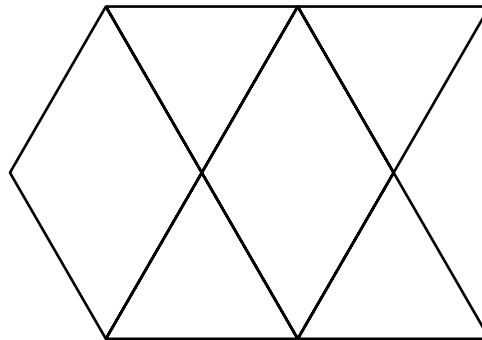
4. If there is time, explore with two other different pattern blocks.

Estimating Weights

Family Note In today's lesson, your child practiced reading weights, in pounds, on a bath scale. One purpose of this activity is to improve your child's perception of weight so he or she can make more realistic estimates of weights. To help develop your child's ability to read a bath scale, take every opportunity at home to use your bath scale to determine the weights of objects.

Please return this Home Link to school tomorrow.

Circle the best estimate for the weight of each object.

1. newborn baby

   8 pounds

   20 pounds

   70 pounds

2. Thanksgiving turkey

   $\frac{1}{2}$ pound

   20 pounds

   70 pounds
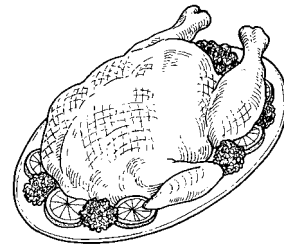
3. bag of apples

   5 pounds

   35 pounds

   65 pounds
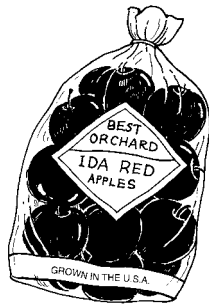
4. An adult bull African elephant (the largest animal on land)

   100 pounds

   500 pounds

   11,000 pounds
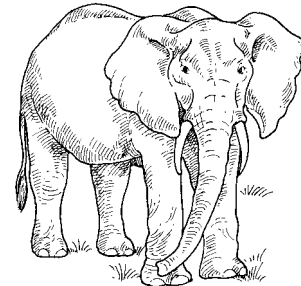
Practice

5.   236
       − 37
       ‾‾‾‾

6.   199
       − 150
       ‾‾‾‾‾

7.   78
       + 29
       ‾‾‾‾

8.   45
       + 45
       ‾‾‾‾

LESSON 7·5

Estimating Weight

Find objects in the room that you think might weigh about 1 pound. Then find objects that you think might weigh about 10 pounds. Record the objects in the boxes below. Weigh the objects and record their approximate weight.

Objects Weighing About 1 Pound	
Object	**Weight**

Objects Weighing About 10 Pounds	
Object	**Weight**

Imagine you found a dog and are writing a lost-and-found notice. To describe the dog, you want to tell its weight. The dog will not get on the scale and stay. How can you find his weight? Explain.

_____

_____

_____

_____

HOME LINK 7·6 | **Comparing Arm Spans**

> **Family Note**
>
> In today's lesson, your child measured his or her standing long jump in centimeters and his or her arm span in inches. Help your child compare his or her arm span to someone else's arm span at home. Also, help your child find objects in the house that are about the same length as his or her arm span.
>
> *Please return this Home Link to school tomorrow.*
>
> **MRB** 62

My arm span is about _____ inches long.

1. Tell someone at home about how long your arm span is in inches.

2. Compare your arm span to someone at home. Can you find someone who has a longer arm span than you do? Is there someone at home who has a shorter arm span?

   _____ has a longer arm span than I do.

   _____ has a shorter arm span than I do.

3. List some objects below that are about the same length as your arm span.

   _____   _____

   _____   _____

4. Explain how you know the objects you listed in Problem 3 are about the same length as your arm span.

   _____

   _____

   _____

Practice

5.	**6.**	**7.**	**8.**
23	45	64	86
+ 19	+ 58	− 39	− 57

212

LESSON 7·6

Measuring Objects
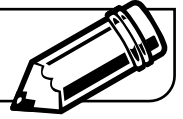
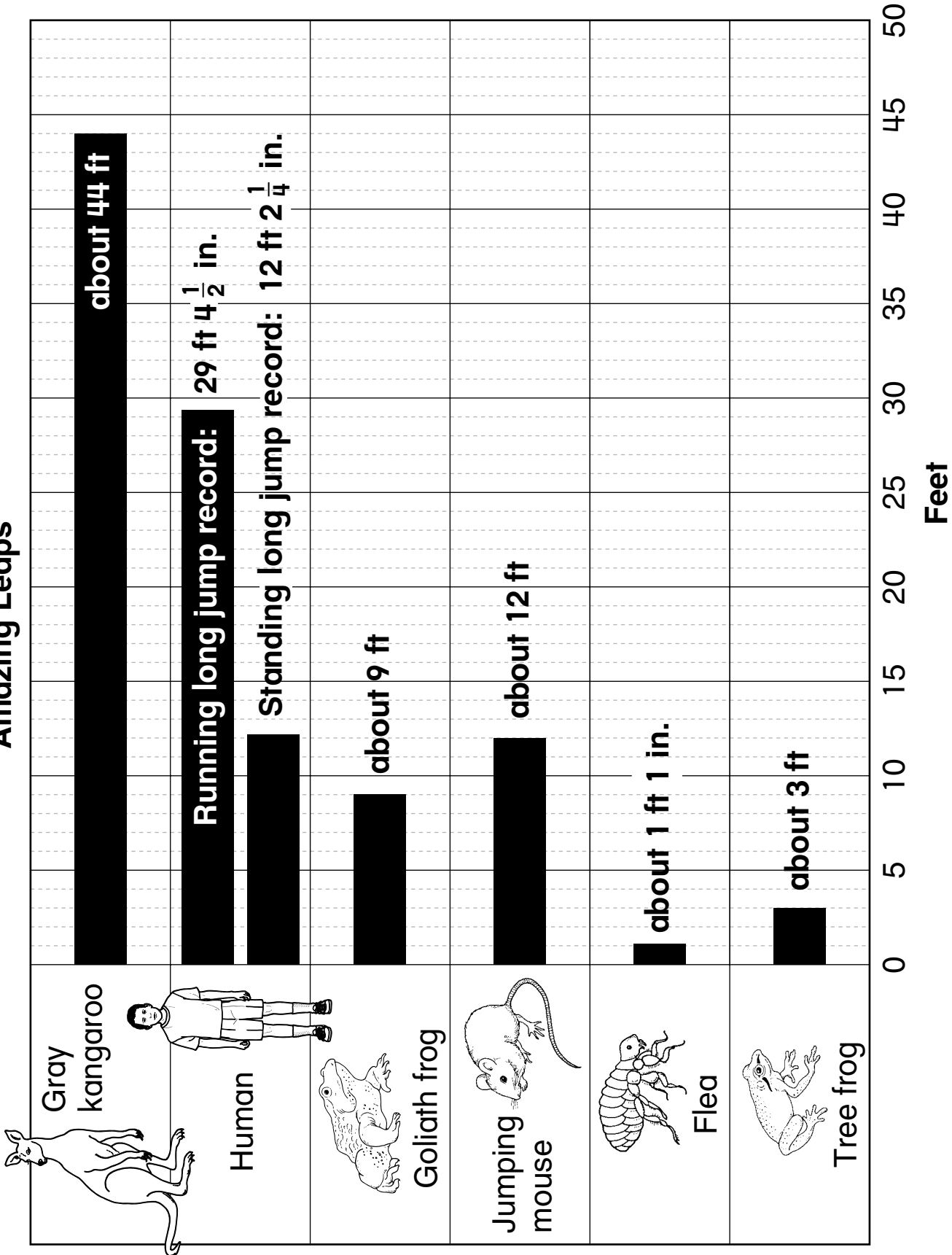|	
Use a centimeter cube to find objects that measure about **1 centimeter** in length. List your objects below.	Use a 1-inch square pattern block to find objects that measure about **1 inch** in length. List your objects below.
Use a base-10 long to find objects that measure about **10 centimeters** in length. List your objects below.	Use 1-inch square pattern blocks to find objects that measure about **10 inches** in length. List your objects below.

213

LESSON 7·6 Amazing Leaps

Amazing Leaps

Gray kangaroo: about 44 ft

Human: Running long jump record: 29 ft 4 $\frac{1}{2}$ in. · Standing long jump record: 12 ft 2 $\frac{1}{4}$ in.

Goliath frog: about 9 ft

Jumping mouse: about 12 ft

Flea: about 1 ft 1 in.

Tree frog: about 3 ft

Feet (scale 0 to 50)

214

HOME LINK 7·7

Find the Middle Value

List the data in order from smallest to largest.

Draw a circle around the median in your list.

1.

12 points	3 points	21 points	15 points	20 points	7 points	9 points

_____ points **smallest**	_____ points	_____ points	_____ points	_____ points	_____ points	_____ points **largest**
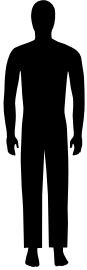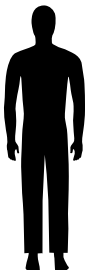
215

Find the Middle Value *continued*

2.

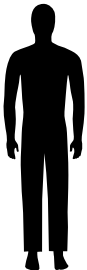| Jarel: 66 in. tall	Suki: 70 in. tall	Peter: 56 in. tall	Keisha: 73 in. tall	Cesar: 68 in. tall

_____ in.   _____ in.   _____ in.   _____ in.   _____ in.

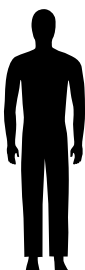**smallest**   **largest**

3.

Jarel: 168 cm tall	Suki: 178 cm tall	Peter: 142 cm tall	Keisha: 185 cm tall	Cesar: 173 cm tall

_____ cm   _____ cm   _____ cm   _____ cm   _____ cm

smallest   **largest**

LESSON 7·7

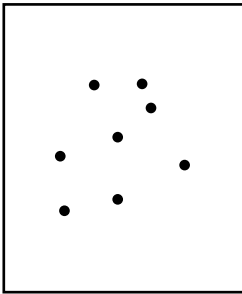# Ordering Numbers

Choose from the number cards pictured below.

| 8 | 27 | 57 | 92 |

Match a number card to each of the sets of pictured dots.

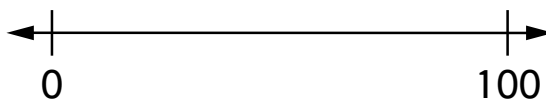_____   _____   _____   _____
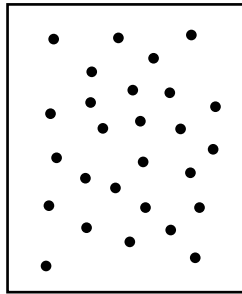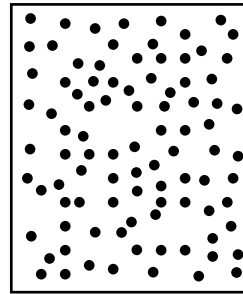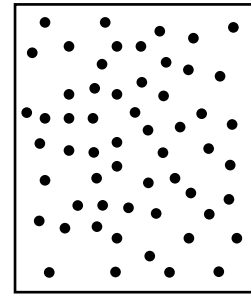
Match a number card to each of the number lines below.

Draw a small mark on the number line about where you think the number would be. Label your mark with the number.

1.

0   100

2.

0   10

3.

0   40

4.

0   70
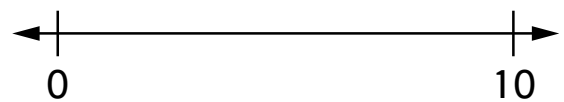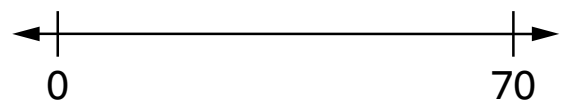
LESSON 7·7

Find the Median
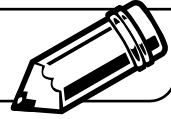
Solve.

The track team collected standing long jump data.

They are as follows:

Our Jumps
93 inches
97 inches
82 inches
96 inches
85 inches
91 inches
89 inches
87 inches

Find the median. _____

Explain your work.

_____

_____

_____

_____

LESSON 7·8 | Table of Our Arm Spans

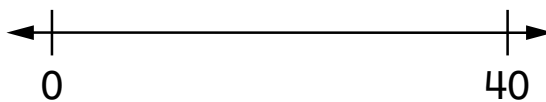Make a table of the arm spans of your classmates.

Arm Span (inches)	Frequency	
	Tallies	Number
	Total =	

LESSON 7·8 | **Bar Graph of Our Arm Spans**

Make a bar graph of the arm spans of your classmates.

Our Arm Spans

Number of Children

Arm Span (inches)

15   10   5   0

220

HOME LINK 7·8   Interpreting Data

Ms. Ortiz is a basketball coach. She measured the height of each player. Then she made the data table shown below.

1. How many players are

50 inches tall? _____ players

2. How many players are

47 inches tall? _____ players

3. The shortest player is

_____ inches tall.

4. The tallest player is

_____ inches tall.

5. How many players did Ms. Ortiz

measure? _____ players

6. Which height occurs most often? _____ inches

7. Find the middle (median) height. _____ inches

Players' Heights	
Height (inches)	**Number of Players**
46	1
47	0
48	3
49	1
50	2
51	1
52	1

LESSON 7·8

Median Arm Spans Bar Graph

Median Arm Spans
for Boys and Girls in Room _____

Median Arm Span (Inches)

Boys   Girls
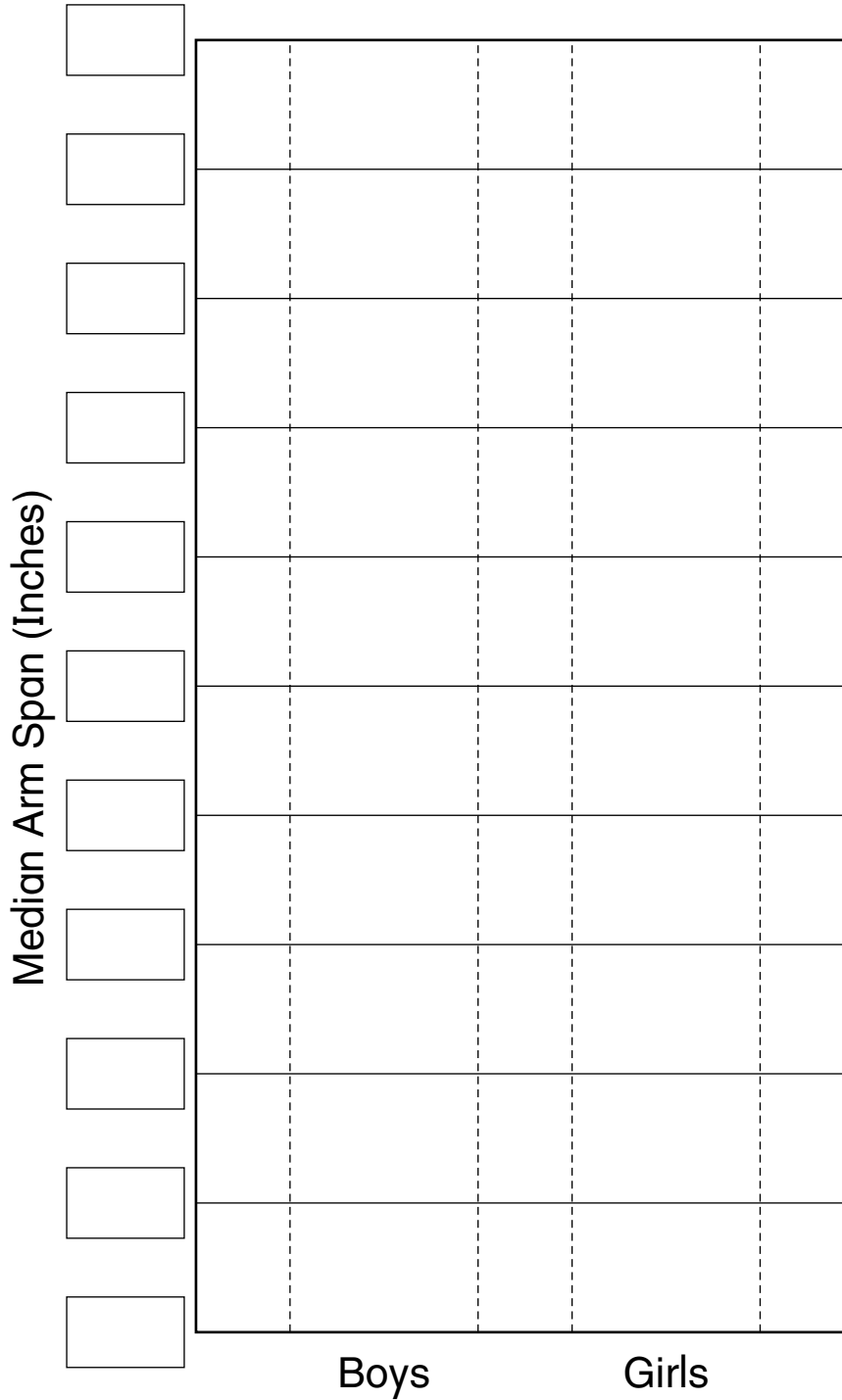
HOME LINK 7·9 | # Unit 8: Family Letter

Fractions

In Unit 8, children will review and extend concepts of fractions. Specifically, they will recognize fractions as names for parts of a whole, or ONE.
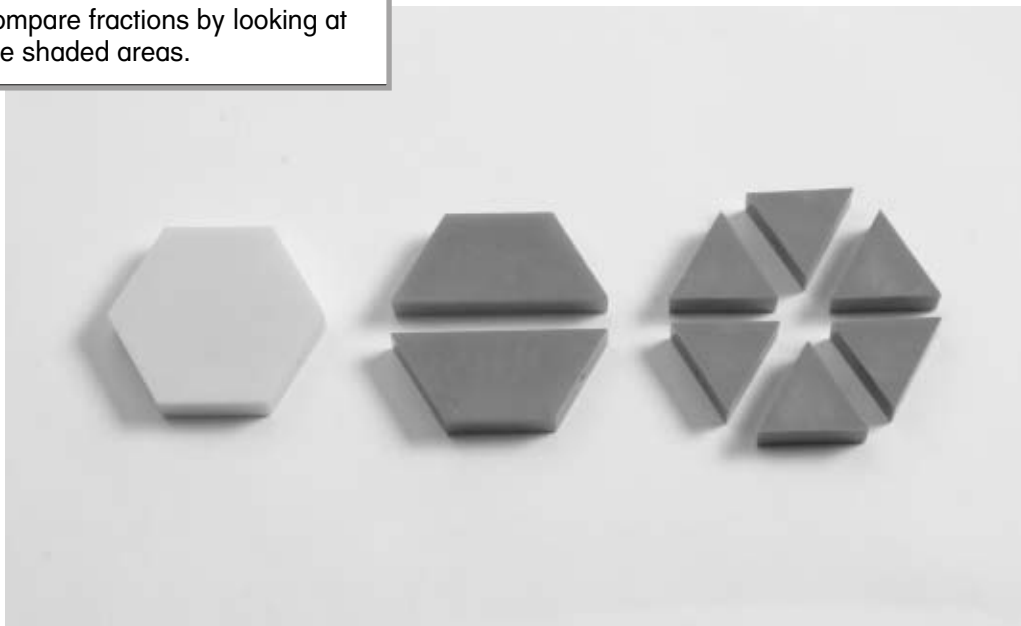
Children will see that, as with whole numbers, many different fractions can name the same quantity. For example, $\frac{2}{4}$ and $\frac{6}{12}$ are names for $\frac{1}{2}$.

Children will also explore relationships among fractions as they work with pattern-block shapes and Fraction Cards that show shaded regions.

$\boxed{\frac{1}{2}}$

$\frac{1}{4} + \frac{1}{4}$ $\frac{3}{6}$

$1\frac{1}{2}$ $\frac{5}{10}$

$1 \div 2$ $\frac{3}{4} - \frac{1}{4}$

$\boxed{\frac{1}{2}}$ $\boxed{\frac{1}{3}}$

Children use Fraction Cards to compare fractions by looking at the shaded areas.
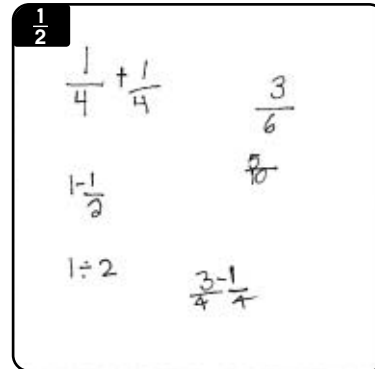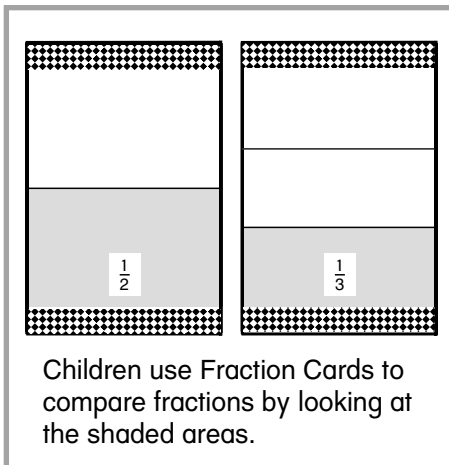
Please keep this Family Letter for reference as your child works through Unit 8.

Vocabulary

Important terms in Unit 8:

fraction A number that names equal parts of a whole, or ONE.

For example, two of these shapes will cover one of these.
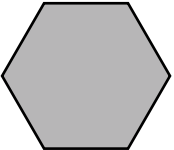
If is ONE, then is one half, usually written $\frac{1}{2}$.

denominator — The number below the line in a *fraction.* It represents the number of equal parts into which the whole, or ONE, is divided.

$$\frac{3}{8}$$

numerator — The number above the line in a *fraction.* It represents the number of equal parts. When the whole, or ONE, is divided into equal parts, the numerator is the number of parts being considered.

It is not necessary for children to use the words numerator and denominator now. They will learn them over time with repeated exposure. Do, however, use these words, as well as the informal "number on the top" and "number on the bottom," when you discuss fractions with your child.

equivalent fractions *Fractions* with different denominators that name the same number. For example, $\frac{1}{2}$ and $\frac{2}{4}$ are equivalent fractions.

Do-Anytime Activities

To work with your child on the concepts taught in this unit and in previous units, try these interesting and rewarding activities:

1. Review fraction notation. For example, ask: "In a fraction, what does the number on the bottom (the denominator) tell you?" "What does the number on the top (the numerator) tell you?"

2. Draw a picture of a rectangular cake, a circular pizza, or a similar food (better yet, have the real thing). Discuss ways to cut the food to feed various numbers of people so each person gets an equal portion.

3. Read a recipe and discuss the fractions in it. For example, ask: "How many $\frac{1}{4}$ cups of sugar would we need to get 1 cup of sugar?"

4. Compare two fractions and tell which is larger. For example, ask: "Which would give you more of a pizza: $\frac{1}{8}$ of it, or $\frac{1}{4}$?"

225

As You Help Your Child with Homework

As your child brings home assignments, you might want to go over the instructions together, clarifying them as necessary. The answers listed below will guide you through this unit's Home Links.

Home Link 8·1

1. $\frac{1}{2}, \frac{1}{2}$ **2.** $\frac{3}{4}, \frac{1}{4}$

Home Link 8·2

1. $\frac{1}{2}$ **2.** $\frac{1}{6}$ **3.** $\frac{2}{3}$ **4.** 101

5. 101   **6.** 132   **7.** 158
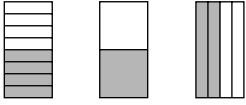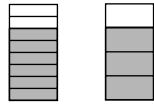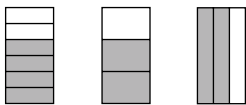
Home Link 8·3

1. 4; 4; 8   **2.** 44   **3.** 98

4. 38   **5.** 90

Home Link 8·4

1. $\frac{1}{2} = \frac{2}{4}$ **2.** $\frac{1}{2} = \frac{4}{8}$ **3.** $\frac{1}{4} = \frac{4}{16}$

4. $\frac{1}{4} = \frac{2}{8}$ **5.** $\frac{1}{5} = \frac{4}{20}$ **6.** 100

7. 82

Home Link 8·5

1.

2.

3.   **4.** 84   **5.** 133

Home Link 8·6

1. Answers vary.   **2.** Answers vary.

3. 77   **4.** 37   **5.** 94   **6.** 15

Home Link 8·7

1. $\frac{4}{7}$ **2.** $\frac{2}{12}$, or $\frac{1}{6}$ **3.** $\frac{1}{3}$ **4.** 4 tulips

5. 104   **6.** 53   **7.** 21   **8.** 39

Building Skills through Games

In Unit 8, your child will practice multiplication and fraction skills by playing the following games:

Array Bingo

Players roll the dice and find an *Array Bingo* card with the same number of dots. Players then turn that card over. The first player to have a row, column, or diagonal of facedown cards calls "Bingo!" and wins the game.
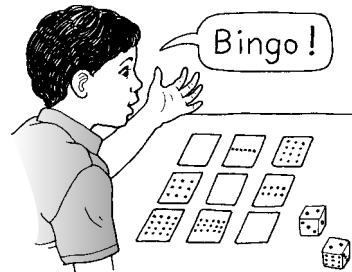
Equivalent Fractions Game

Players take turns turning over Fraction Cards and finding matching cards that show equivalent fractions.

Fraction Top-It

Players turn over two Fraction Cards and compare the shaded parts of the cards. The player with the larger fraction keeps both of the cards. The player with more cards at the end wins.

Name That Number

Each player turns over a card to find a number that must be renamed using any combination of five faceup cards.