

NAME _____

DATE _____

Home Connection 11 ★ Worksheet

Explore 4's

1 Make a list of all the things you can think of that come in groups of 4.

- 4 quarters in a dollar

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2 Write at least 10 different number sentences that have 4 for an answer. You can use numbers as large as you want, and you can have as many computations as you want in each number sentence.

- $16 - 8 - 4 = 4$
- $(10 \div 2) - 1 = 4$
- $(249 - 240 + 7) \div 4 = 4$

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(Continued on back.)

Home Connection 11 Worksheet (cont.)

Solve each of the story problems below. Be sure to show your work using words, numbers, and/or labeled sketches.

3 On her birthday, Imani took 3 of her friends to the Fun Center. The first thing she did when they got there was exchange a \$20 bill for quarters. How many quarters did she get?

4 Then Imani shared the quarters with her 3 friends. How many quarters did each person, including Imani, get?

5 Some of the games at the Fun Center cost 25¢ to play, and some of them cost 50¢. If one of the friends played only the 50¢ games, how many games could she play with the money she got from Imani?

6 Imani's friend Sam played exactly 16 games and used up all the money Imani gave him. How many 25¢ games did he play, and how many 50¢ games?

**CHALLENGE**

7 If Imani had taken 4 friends to the Fun Center instead of 3, how many quarters would each person, including Imani, have gotten? Show your work on another piece of paper.

NAME _____

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Home Connection 12 ★ Activity



NOTE TO FAMILIES

This Home Connection asks students to measure common items at home in centimeters. If you have a ruler or tape measure at home marked in centimeters, have your child use it. If not, you can cut out the strips below and tape or glue them together to create a measuring tape.

Measuring in Centimeters

1 Find a ruler or tape measure that is marked in centimeters. You can also cut out the strips below and tape or glue them together to make your own measuring tape.

2 By yourself or with another family member or two, measure the items listed on the worksheet and record your results.

1	2	3	4	5	6	7	8	9	10	glue or tape
centimeters										
11	12	13	14	15	16	17	18	19	20	glue or tape
21	22	23	24	25	26	27	28	29	30	
31	32	33	34	35	36	37	38	39	40	glue or tape
41	42	43	44	45	46	47	48	49	50	
51	52	53	54	55	56	57	58	59	60	


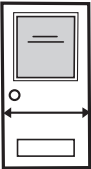

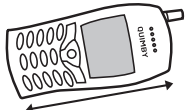

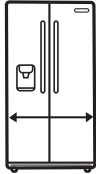

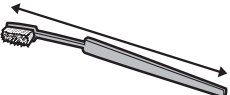
NAME _____

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Home Connection 12 ★ Worksheet

Measuring in Centimeters

Please measure the following objects in centimeters and record the results.

Object To Be Measured	Length in Centimeters
1 width of your bed 	
2 width of a door 	
3 height from the ground to the seat of your favorite chair 	
4 length of a telephone or cell phone 	
5 dimensions of your favorite book (length and width) 	
6 width of your refrigerator 	
7 dimensions of a towel (length and width) 	
8 length of your toothbrush 	

(Continued on back.)

Home Connection 12 Worksheet (cont.)

Locate objects at home that are about 6 cm and 80 cm long or tall. Record the name of the object below.

Approximate Length	Object You Found
9 about 6 cm long or tall	
10 about 80 cm long or tall	

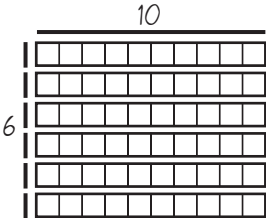
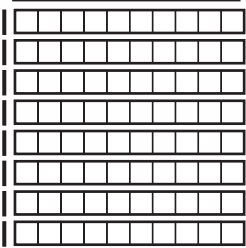
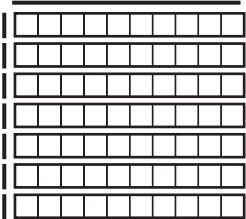
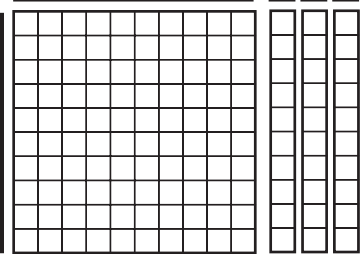
NAME _____

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Home Connection 13 ★ Worksheet

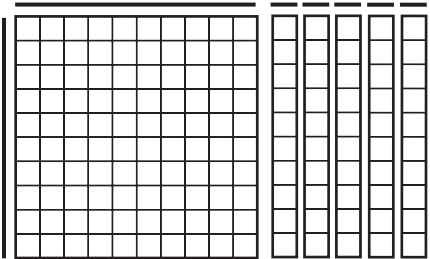
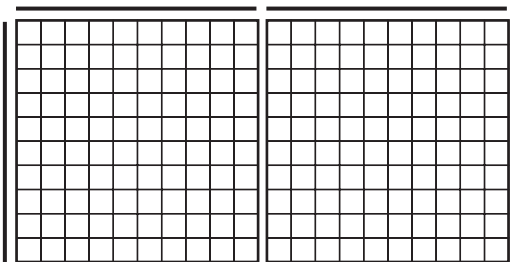
Multiplying by 10

1 For each rectangle below, label the dimensions, find the area, and write a multiplication sentence to describe the array.

Labeled Array	Area	Multiplication Sentence
<p>example</p> 	60	$6 \times 10 = 60$
<p>a</p> 		
<p>b</p> 		
<p>c</p> 		

(Continued on back.)

Home Connection 13 Worksheet (cont.)

Labeled Array	Area	Multiplication Sentence
d 		
e 		

2 Complete the multiplication facts below.

$10 \times 4 = \underline{\quad}$

$10 \times 2 = \underline{\quad}$

$10 \times 9 = \underline{\quad}$

$10 \times 3 = \underline{\quad}$

$10 \times 5 = \underline{\quad}$

$10 \times 8 = \underline{\quad}$

$$\begin{array}{r} 14 \\ \times 10 \\ \hline \end{array}$$

$$\begin{array}{r} 11 \\ \times 10 \\ \hline \end{array}$$

$$\begin{array}{r} 15 \\ \times 10 \\ \hline \end{array}$$

$$\begin{array}{r} 19 \\ \times 10 \\ \hline \end{array}$$

$$\begin{array}{r} 30 \\ \times 10 \\ \hline \end{array}$$

$$\begin{array}{r} 40 \\ \times 10 \\ \hline \end{array}$$

$$\begin{array}{r} 50 \\ \times 10 \\ \hline \end{array}$$

3 What happens every time you multiply a number by 10? Why?

(Continued on next page.)

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Home Connection 13 Worksheet (cont.)

4 Write a multiplication equation or story problem in each empty box to complete the table.

Story Problem	Multiplication Equation
example Sarah has 5 dimes. How much money does she have?	$5 \times 10\text{¢} = 50\text{¢}$
a James has 12 dimes in his pocket. How much money does he have?	
b Larry has 16 dimes in his collection of old coins. How much money is that?	
c	$10\text{¢} \times 30 = \$3.00$
d	$21 \times 10\text{¢} = \$2.10$

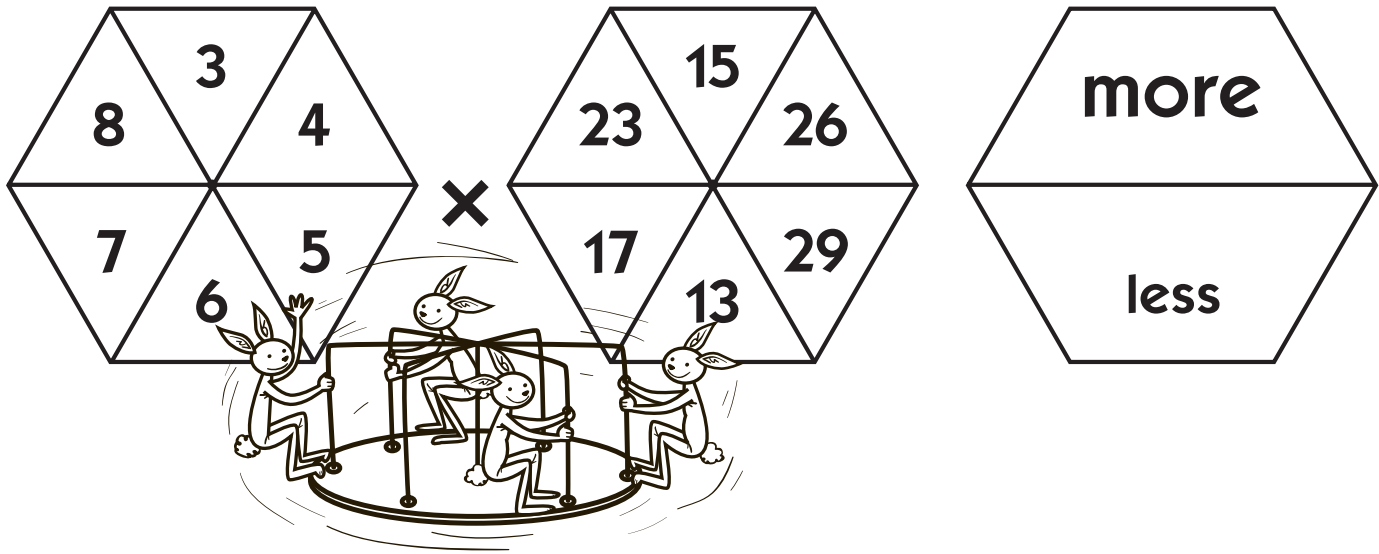
**CHALLENGE**

5 Dana has only nickels in her hand and Ajah has exactly the same number of dimes and no other coins. Together they have a total of 90¢. How many coins is each person holding? Show your work below or use the back of this page if you need more room.

Home Connection 14 Activity (cont.)

Spin & Multiply Spinners

In each turn, spin the first two spinners below and multiply the numbers. At the end of the game, spin the More or Less Spinner to determine who wins.






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Home Connection 15 ★ Worksheet

Coins & Arrays

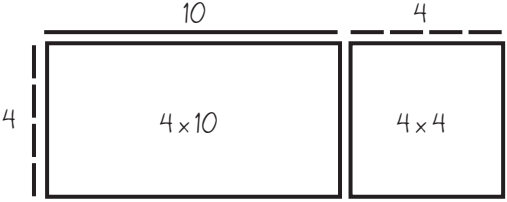



1 Write a multiplication equation to show how much each group of coins is worth.

Coin	Group of Coins	Multiplication Equation
Nickels 	example 5 nickels	$5 \times 5¢ = 25¢$
	a 10 nickels	
	b 15 nickels	
Dimes 	c 10 dimes	
	d 20 dimes	
	e 30 dimes	
Quarters 	f 8 quarters	
	g 12 quarters	
	h 17 quarters	

(Continued on back.)

Home Connection 15 Worksheet (cont.)

2 Label each array frame below. Then fill it in with labeled rectangles. Write an equation to show how you got the total, and then write a multiplication sentence to match the array. Cut out the base ten pieces on page 45 if you want to build the arrays.

Labeled Array Frame & Rectangles	Addition Equation	Multiplication Equation
<p>example</p> 	$40 + 16 = 56$	$4 \times 14 = 56$
<p>a</p> 		
<p>b</p> 		
<p>c</p> 		

Continued on next page.

Home Connection 15 Worksheet (cont.)**CHALLENGE**

Raina said, “How many different ways are there to make 30¢ using pennies, nickels, dimes, and/or quarters?”

3 What is this problem asking you to do?

4 Check the strategy you plan to use (check one):

a ___ guess and check

b ___ make a table or an organized list

c ___ draw a diagram

d ___ other

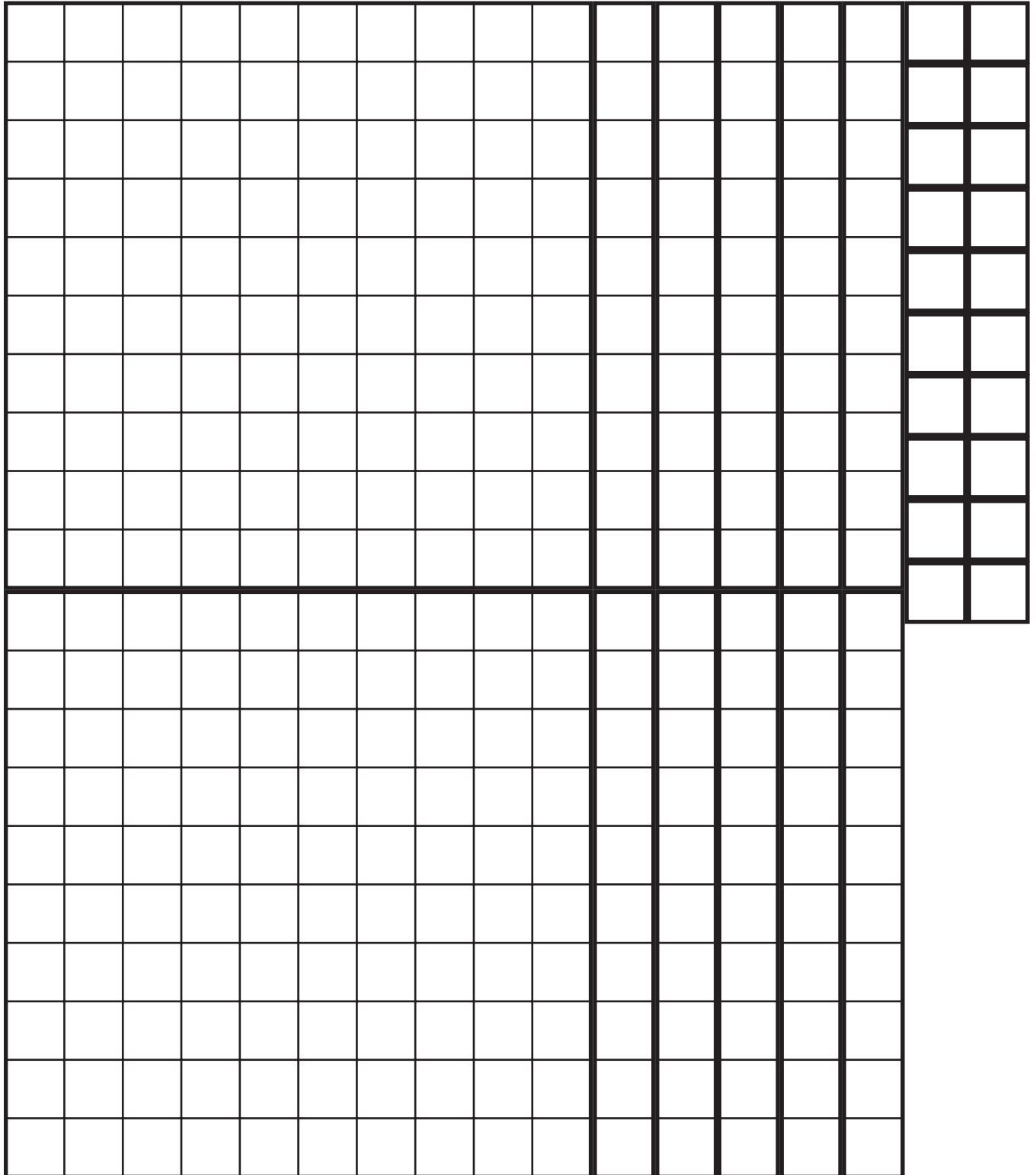
5a Show your work below.

b There are _____ different ways to make 30¢ using pennies, nickels, dimes, and/or quarters.

Home Connection 15 Worksheet (cont.)

Base Ten Pieces

If you want to use base ten pieces, cut them out along the heavy lines.



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Home Connection 16 ★ Activity



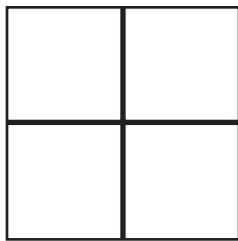
NOTE TO FAMILIES

This Home Connection combines math and design. Students use their creativity to design a pattern and then practice computation to determine how much it would cost to make that pattern in tile.

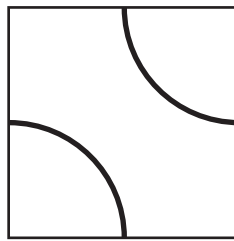
Design a Floor Pattern

1 Choose one of the two Floor Plans: Floor Plan 1 below *or* Floor Plan 2 on the back of this page. (If you really enjoy this project, you can do both.)

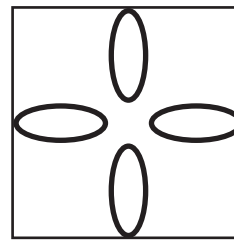
2 Draw one of the following 3 tile designs in each square on your floor plan. Do not use the same design for every square.



Tile A



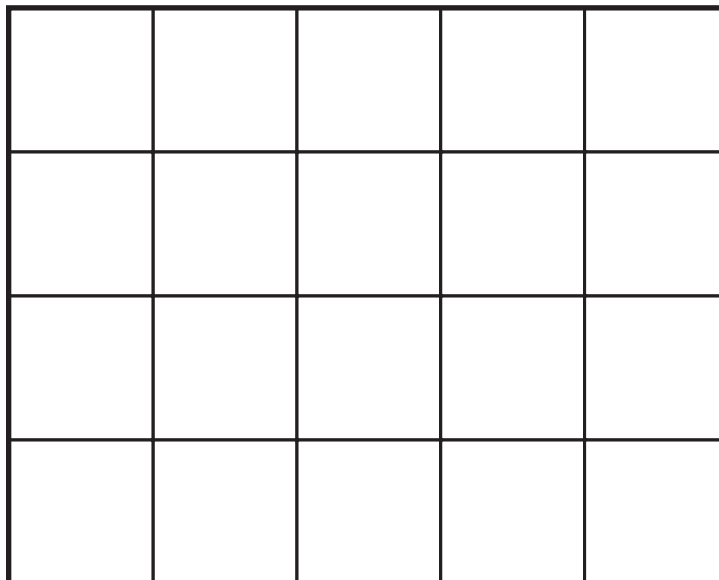
Tile B



Tile C

3 Answer questions 1–6 on the worksheet.

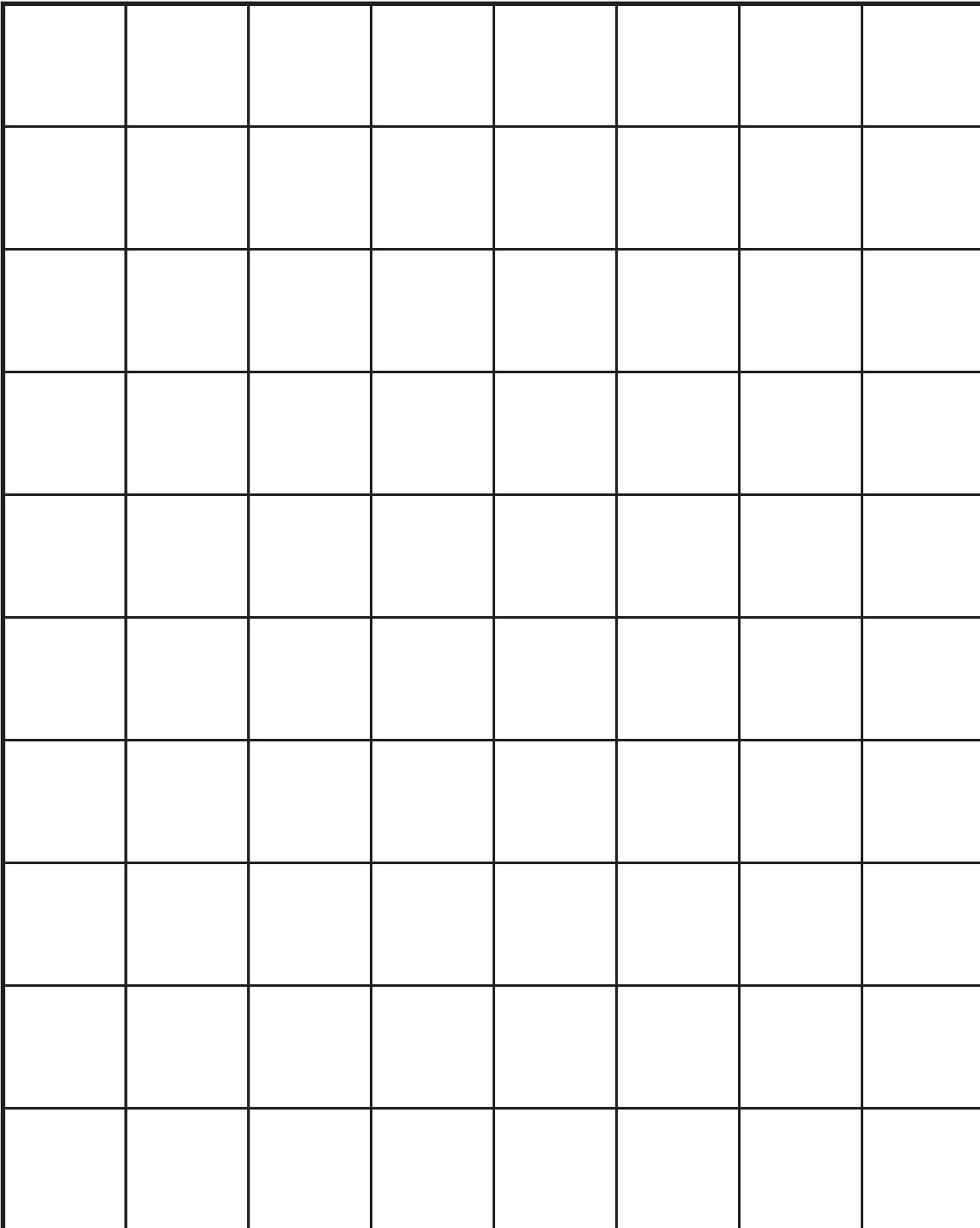
Floor Plan 1



(Continued on back.)

Home Connection 16 Activity (cont.)

Floor Plan 2



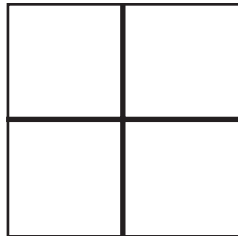
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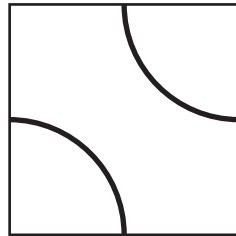
Home Connection 16 ★ Worksheet

Calculating the Costs of Your Floor Pattern(s)

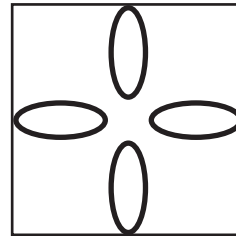
Here is the cost of each tile.



Tile A: 25 cents



Tile B: 50 cents



Tile C: 1 dollar

Use your floor plan(s) and the information above to answer the questions below. (Remember, you only have to do one of the floor plans, not both.)

Question	Floor Plan 1	Floor Plan 2
1 How many tiles did you need for the floor plan you chose?		
2 How many of each tile did you use in your design of the floor plan?	A	A
	B	B
	C	C
3 How much money did all the tiles A cost?		
4 How much money did all the tiles B cost?		
5 How much money did all the tiles C cost?		
6 How much money did the entire floor pattern cost?		

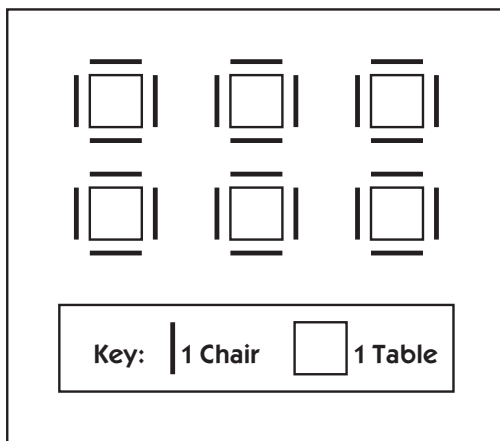
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Home Connection 17 ★ Worksheet

Which Operation?

1 Josie was planning a party. She drew a sketch of how she wanted to set up the chairs and tables. Which equation best represents the number of chairs she sketched?



- $4 + 6 = 10$
 $6 \times 4 = 24$
 $24 - 4 = 20$
 $6 \times 6 = 36$

2 There were 24 kids at Josie's party (including her), and each of them ate 3 pieces of pizza. Which expression shows how many pieces of pizza they ate in all?

- $3 + 24$
 $24 - 3$
 $24 \div 3$
 24×3

3 At the end of the party, the kids broke open the piñata. When they scrambled for the candy, Gabe got 5 pieces. Maria got 3 times as many pieces as Gabe. Which of the numbers described below shows how many pieces of candy Maria got?

- The sum of 5 and 3
 The difference between 5 and 3
 The product of 5 and 3
 The quotient of 5 and 3

4 Josie has 5 gallons of fruit punch. What is one way to figure out how many cups of punch that is?

GALLONS	CUPS
1	16
2	32
3	48

The table above shows how many cups there are in different numbers of gallons.

- Add 16 to 5
 Multiply 5 by 16
 Divide 16 by 5
 Subtract 5 from 16

(Continued on back.)

Home Connection 17 Worksheet (cont.)

5 Draw a line to match each story problem below to the equation that best shows how to solve the problem. Then complete each equation. You can use the Base Ten Grid Paper on page 53 if you like.

a Josie's mom bought 4 packages of mini-candy bars to put in the piñata. There were 28 in each package. How many mini-candy bars were there in all?
b Josie got 28 napkins out of the package but then realized that she could put 4 of them away. How many did she set out on the tables?
c Josie's brother blew up 28 balloons for the party and had enough to put 4 at each table. How many tables were there?
d Josie had \$28 in her savings account. Josie earned \$10 helping with chores. Josie spent \$6 right away, but she put the other \$4 in her account. How much money did she have in her savings account then?

$28 + 4 = \underline{\quad}$
$28 - 4 = \underline{\quad}$
$28 \times 4 = \underline{\quad}$
$28 \div 4 = \underline{\quad}$

6 Write a story problem for each of the 2 equations below, and then solve your own problems. Use the Base Ten Grid Paper on page 53 if you like.

Equations	Story Problem	Solution
a $16 \times 8 = \underline{\quad}$		
b $16 \div 8 = \underline{\quad}$		


CHALLENGE

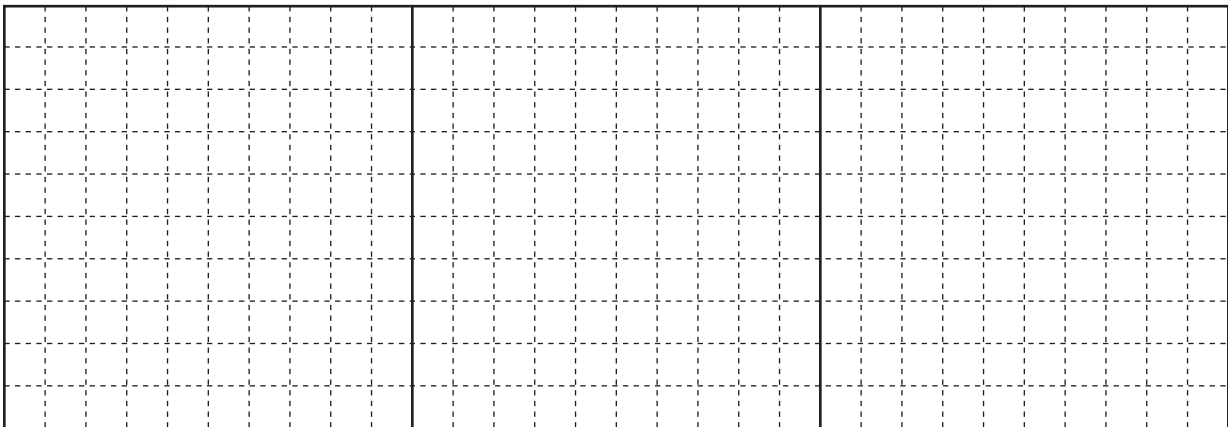
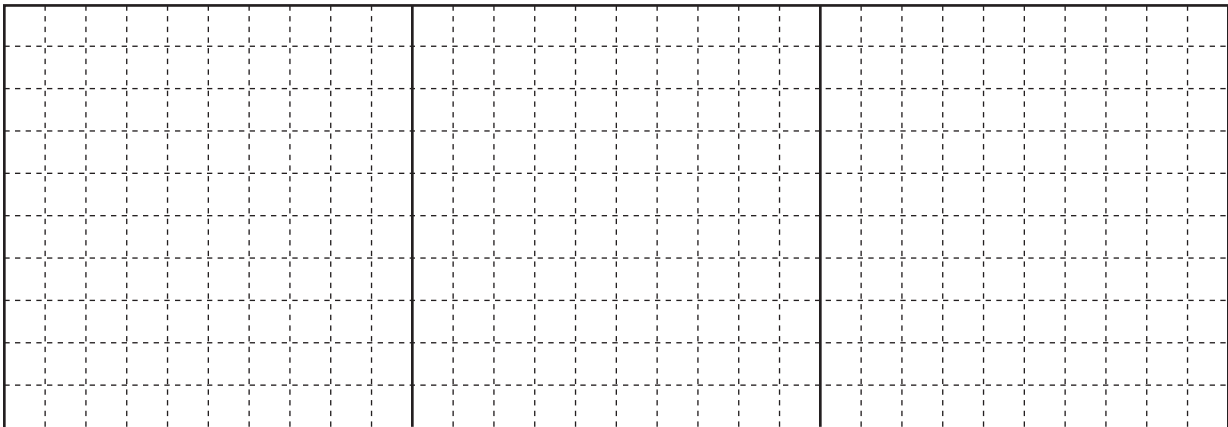
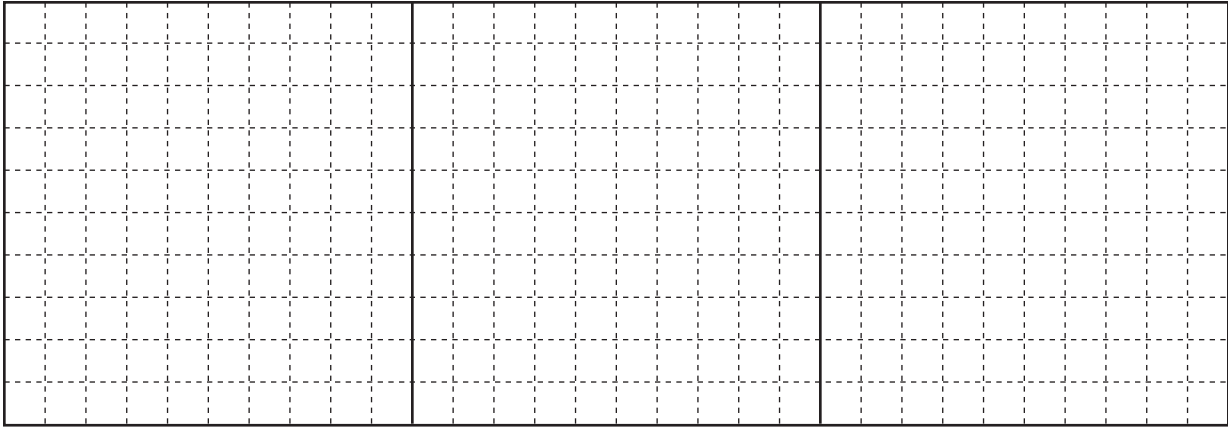
7 Josie's mom bought 9 pizzas for the party. How will she need to cut them in order to have enough pieces for the party? (See Problem 2 for more information.) Use numbers, sketches, and/or words to show your work on another sheet of paper.

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Home Connection 17 Worksheet (cont.)

Base Ten Grid Paper



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Home Connection 18 ★ Activity



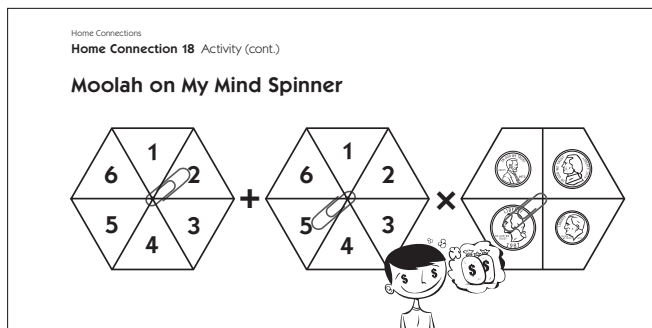
NOTE TO FAMILIES

For this Home Connection, you'll play a game called Moolah on My Mind with your child. We have played the game in school, and your child can help you learn to play. You can also follow the directions below. The game is designed to provide practice multiplying large numbers using coin values, which are easier for many students to work with right now.

You'll need two pencils and a paperclip to play Moolah on My Mind. Use your pencil and the paperclip as a spinner.

Instructions for Moolah on My Mind

- Take turns spinning one of the number spinners with your partner. The player with the highest number goes first.
- Spin both number spinners and the coin spinner.



- Write an expression in the first column to show the results of your spins. You'll add the two numbers and multiply by the value of the coin.
- Multiply to find out how much money you collected and write that amount in the second column. Write it again in the last column so you can keep a running total of your money.

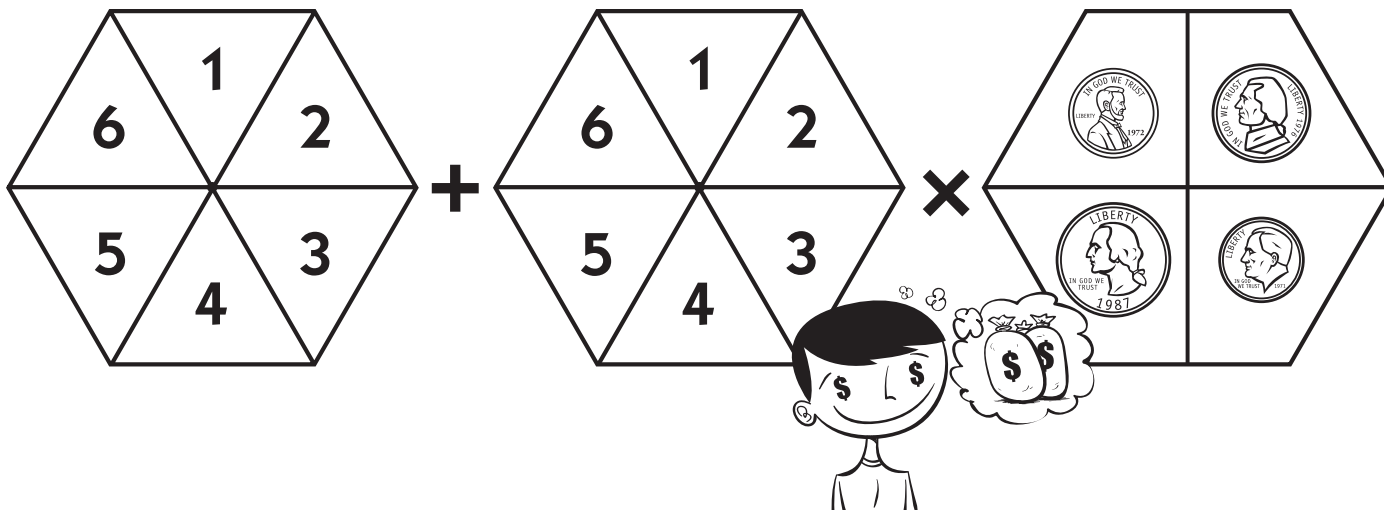
Multiplication Expression	Amount of Money You Got This Turn	Total So Far
sum of the 2 numbers times the coin value		
$(2 + 5) \times 25¢$	\$1.75	\$1.75

- Take turns with your partner. Help each other make sure that you are adding your money accurately. In other words, be sure each other's running totals are correct.

Multiplication Expression	Amount of Money You Got This Turn	Total So Far
sum of the 2 numbers times the coin value		
$(2 + 5) \times 25¢$	\$1.75	\$1.75
$(5 + 4) \times 10¢$.90¢	\$2.65

- When both players have taken 10 turns, the game is over and the player with the most money wins.
- Play another round if you like, using the optional record sheets.

Moolah on My Mind Spinner



NAME _____

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Home Connection 18 Activity (cont.)

Moolah on My Mind Record Sheet

Student _____

Multiplication Expression sum of the 2 numbers times the coin value	Amount of Money You Got This Turn	Total So Far
(+) × ¢		

Home Connection 18 Activity (cont.)

Moolah on My Mind Record Sheet (optional second game)

Student _____

Multiplication Expression sum of the 2 numbers times the coin value	Amount of Money You Got This Turn	Total So Far
$(\quad + \quad) \times \quad \text{\$}$		

NAME _____

DATE _____

Home Connection 18 Activity (cont.)

Moolah on My Mind Record Sheet

Family Member _____

Multiplication Expression sum of the 2 numbers times the coin value	Amount of Money You Got This Turn	Total So Far
(+) × ¢		

Home Connection 18 Activity (cont.)

Moolah on My Mind Record Sheet (optional second game)

Family Member _____

Multiplication Expression sum of the 2 numbers times the coin value	Amount of Money You Got This Turn	Total So Far
$(\quad + \quad) \times \quad \text{¢}$		