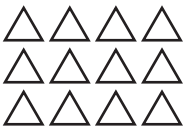
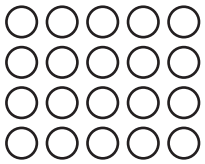
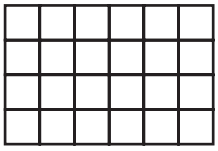
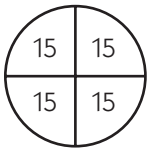
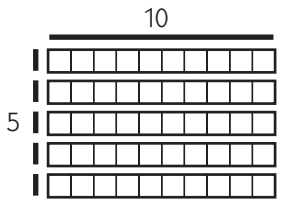
NAME _____ **DATE** _____

Home Connection 42 ★ Worksheet

The Relationship between Multiplication & Division

Write a multiplication and division equation to go with each picture.

Picture	Multiplication Equation	Division Equation
example 	$3 \times 4 = 12$	$12 \div 3 = 4$
1 		
2 		
3 		
4 		

5 Write a story problem to go with *one* of the equations above.

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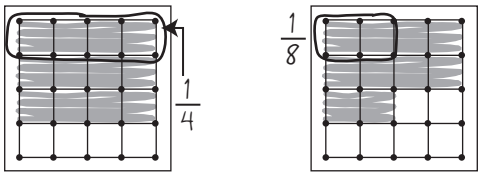
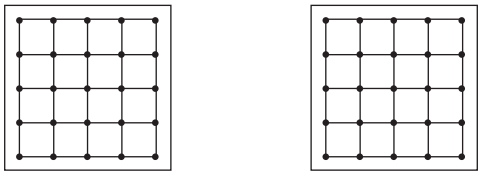
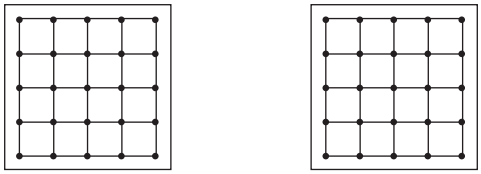
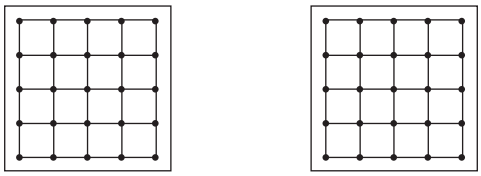
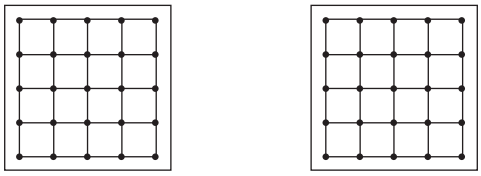
Home Connection 43 ★ Worksheet

Fraction Relationships

Write <, =, or > on the line between each pair of fractions to show whether one is greater than the other or whether they are equal. Then make sketches on the geoboard models to prove your statement is true. The first one is done for you as an example.

Remember that < means less than, for example 5 < 6. Also, > means greater than, for example 6 > 5.

<, =, or >	Sketch of Fractions
example $\frac{3}{4} > \frac{5}{8}$	
1 $\frac{3}{8} __ \frac{1}{2}$	
2 $\frac{1}{4} __ \frac{2}{8}$	
3 $\frac{1}{2} __ \frac{3}{16}$	
4 $\frac{2}{4} __ \frac{1}{2}$	

(Continued on back.)

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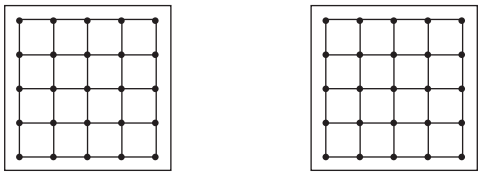
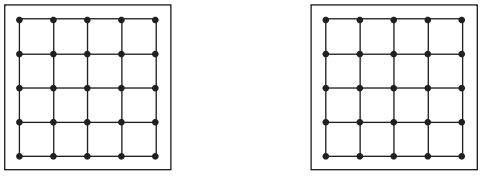
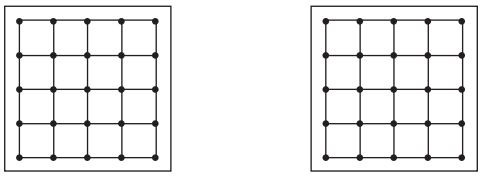
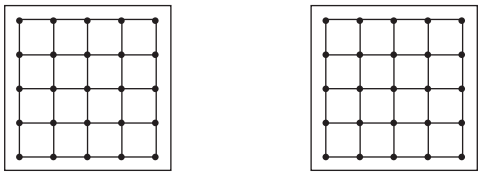
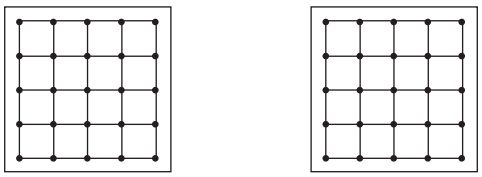
Home Connection 43 Worksheet (cont.)

<, =, or >	Sketch of Fractions
5 $\frac{12}{16}$ ___ $\frac{7}{8}$	
6 $\frac{8}{16}$ ___ $\frac{2}{4}$	
7 $\frac{1}{4}$ ___ $\frac{5}{16}$	
8 $\frac{3}{4}$ ___ $\frac{11}{16}$	
9 $\frac{1}{8}$ ___ $\frac{1}{4}$	

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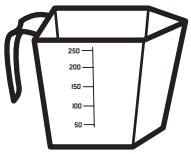
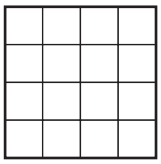
Home Connection 44 ★ Worksheet

More About Cups, Quarts & Gallons

1 It takes 4 cups to fill a quart and 4 quarts to fill a gallon. This system of measuring works in 4's, just like the base four pieces. Draw a line from each of the containers below to the base four piece that best represents it.



1 cup



base four mat

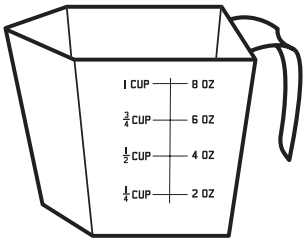
1 quart (4 cups)

base four unit

1 gallon (16 cups or 4 quarts)

base four strip

2 If you look closely at a measuring cup like the one below, you'll see that it is divided into 8 smaller sections called fluid ounces. There are 8 fluid ounces in a cup.



a How many fluid ounces are in a quart?

b Write an equation to show how you got your answer in part a.

c How many fluid ounces are in a gallon?

d Write an equation to show how you got your answer in part c.

(Continued on back.)

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Home Connection 44 Worksheet (cont.)

In addition to cups, quarts, and gallons, people also use a unit called a *pint* to measure volume. A pint is equal to 2 cups.

Use this information to answer the following questions. For each one, write an equation to show how you got your answer.

3a How many fluid ounces are in a pint?

b Write an equation to show how you got the answer.

4a How many pints are in a quart?

b Write an equation to show how you got the answer.

5a How many pints are in a gallon?

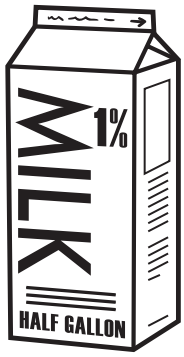
b Write an equation to show how you got the answer.

6a Sarah and her mom were making fruit punch for the scout troop. The recipe called for 6 pints of orange juice, but they could only find quarts of orange juice at the store. How many quarts of orange juice did they need to get?

b Write an equation to show how you got the answer.

7 How many 4-fluid-ounce servings are in a half-gallon of milk? Show your work.

There are _____ 4-fluid-ounce servings in $\frac{1}{2}$ gallon of milk.



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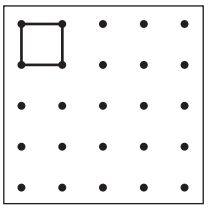
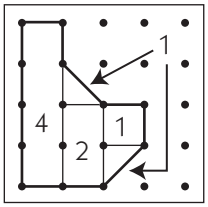
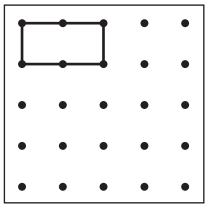
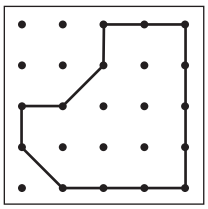
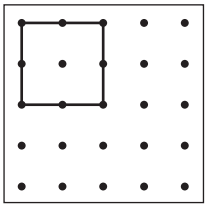
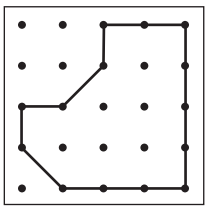
Home Connection 45 ★ Worksheet

Fractions & Base Four

If this is 1 unit of area,	what is the area of this figure? Show your work here.	Area
example 	 $4 + 2 + 1 + 1 = 8$	8 sq. units
1 		
2 		

3 Bobby and Sue bought a can of paint so they could paint their bicycles the same color as their favorite football team's uniforms. Bobby ended up using $\frac{3}{5}$ of the can because he spilled some. Sue used $\frac{1}{5}$ of the can.

a How much of the can of paint did Bobby and Sue use altogether?

b How much of the can of paint was left over for their little brother Max to use to paint his tricycle?

(Continued on back.)

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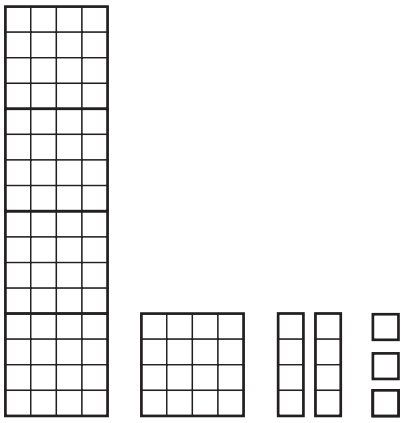
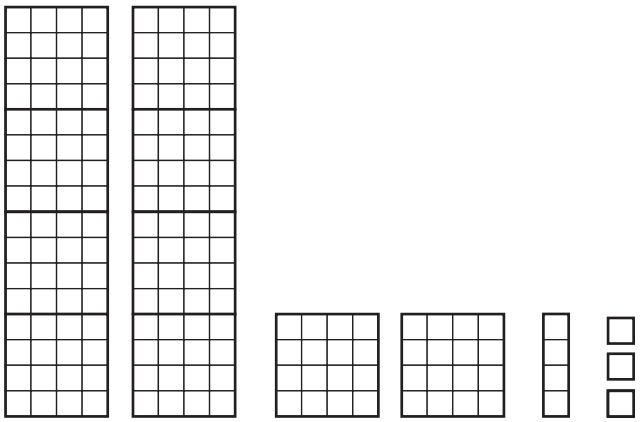
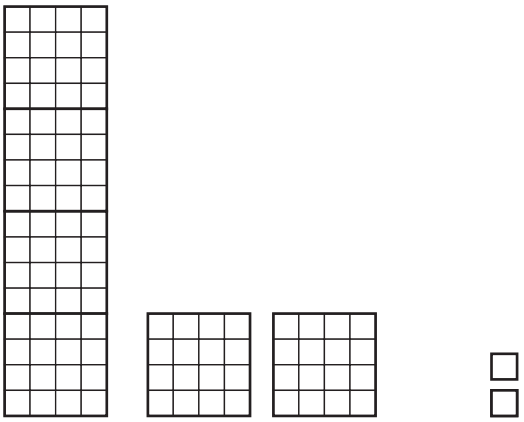
Home Connection 45 Worksheet (cont.)

4 Write the name of each collection in base four notation. The first one has been done for you as an example.

Collection	Base Four Name
example 	1123_{four}
a 	
b 	

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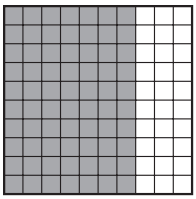
Home Connection 46 ★ Worksheet

Decimals Are Fractions

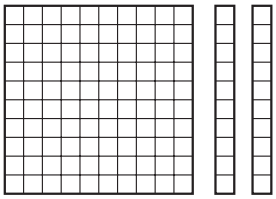
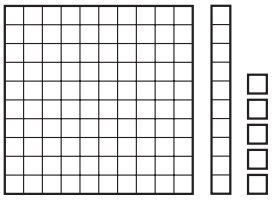
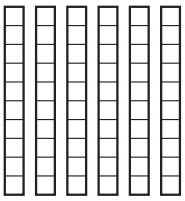
1 This large square represents 1 unit.

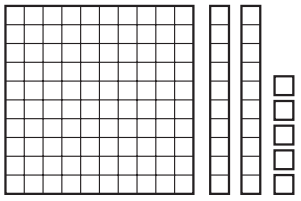
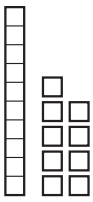
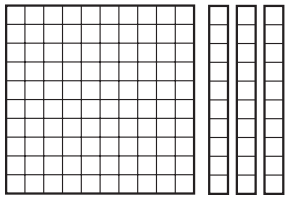
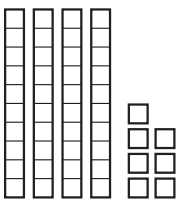


a How many tenths are shaded?

b How many hundredths are shaded?

2 Write the fraction name and the decimal name for each of the collections below. The first two are done as examples. As in the picture above, the large square represents 1 unit. The strip represents 1 tenth, and the smallest square represents 1 hundredth.

Collection	Fraction	Decimal
	$1\frac{2}{10}$	1.2
	$1\frac{15}{100}$	1.15
a 		
b		

Collection	Fraction	Decimal
c 		
d 		
e 		
f 		

(Continued on back.)

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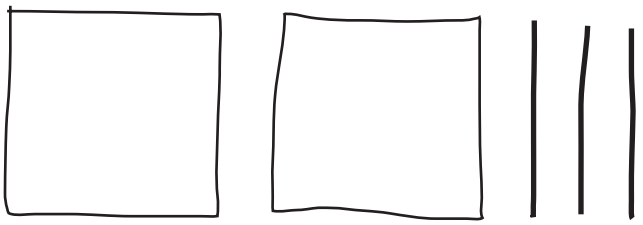
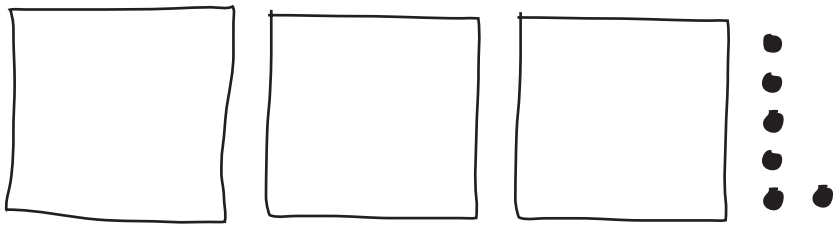
Home Connection 46 Worksheet (cont.)

3 Now draw a quick sketch of each of the fractions below and write its decimal name. The first two are done as examples.

Fraction	Sketch	Decimal
example $2\frac{3}{10}$		2.3
example $3\frac{6}{100}$		3.06
a $1\frac{9}{10}$		
b $3\frac{8}{10}$		
c $3\frac{3}{100}$		

(Continued on next page.)

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Home Connection 46 Worksheet (cont.)

Fraction	Sketch	Decimal
d $2\frac{7}{10}$		
e $1\frac{2}{10}$		
f $1\frac{20}{100}$		
g $2\frac{5}{10}$		
h $2\frac{50}{100}$		

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Home Connection 47 ★ Activity

NOTE TO FAMILIES

We are midway through a unit on fractions and decimals. Over the next few weeks, students will continue to develop their skills at reading, writing, and understanding decimals. They will also investigate the connections between money, fractions, and decimals. In today's game, visual models are used to help students become more comfortable interpreting and comparing money amounts, decimals, and fractions.

Money, Fraction & Decimal Showdown

1 Label each of the cards on the 5 attached sheets. (Some of the cards on the first sheet have already been labeled as examples.) Then cut them out, mix them thoroughly, and place them in a stack face down.

2 Take turns drawing a card and reporting the money amount, fraction, or decimal you see. Work with your partner to compare the amounts on the two cards: which is worth more and how do you know? The person whose card is worth more gets to take both cards. If the two cards are worth the same amount, both players should each draw another card. The player whose card is worth more this time gets to take all 4 cards.

3 Continue until there are no cards left. The player with the most cards wins.

4 Shuffle the cards and play again.

5 After you have played the game at least twice, shuffle the cards well and then pick 14 of them. Put them in order from smallest to greatest and list them in that order on the lines below. If some of them are equal in value, like \$0.50 and $\frac{1}{2}$, put them on two lines, one below the other.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

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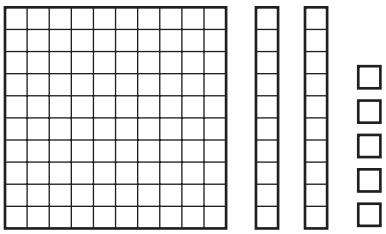
Home Connection 47 Activity (cont.)

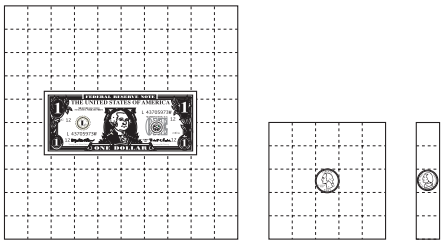
Money, Fraction & Decimal Showdown Cards page 1 of 5

Label each card and then cut out all the cards.



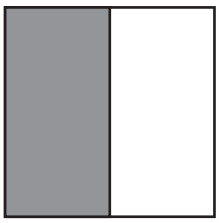
1.25

HC 47 Money, Fraction & Decimal Showdown Card



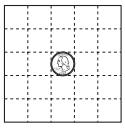
$1.30

HC 47 Money, Fraction & Decimal Showdown Card



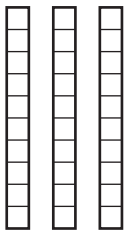
$\frac{1}{2}$

HC 47 Money, Fraction & Decimal Showdown Card



$0.25

HC 47 Money, Fraction & Decimal Showdown Card

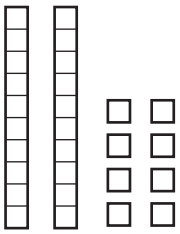


0.3

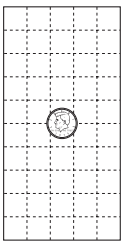
HC 47 Money, Fraction & Decimal Showdown Card

0.05

HC 47 Money, Fraction & Decimal Showdown Card



HC 47 Money, Fraction & Decimal Showdown Card



HC 47 Money, Fraction & Decimal Showdown Card

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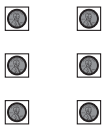
Home Connection 47 Activity (cont.)

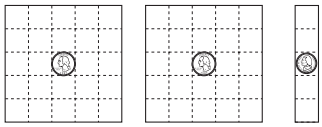
Money, Fraction & Decimal Showdown Cards page 2 of 5

Label each card and then cut out all the cards.

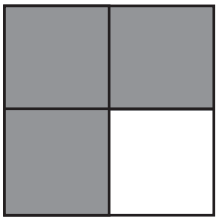


$0.06

HC 47 Money, Fraction & Decimal Showdown Card

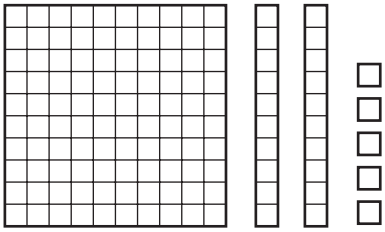


HC 47 Money, Fraction & Decimal Showdown Card

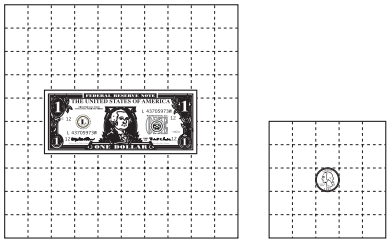


HC 47 Money, Fraction & Decimal Showdown Card

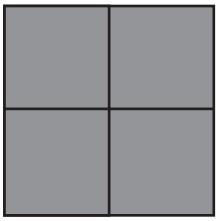
HC 47 Money, Fraction & Decimal Showdown Card



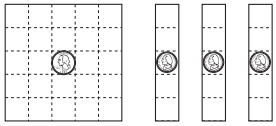
HC 47 Money, Fraction & Decimal Showdown Card



HC 47 Money, Fraction & Decimal Showdown Card



HC 47 Money, Fraction & Decimal Showdown Card



HC 47 Money, Fraction & Decimal Showdown Card

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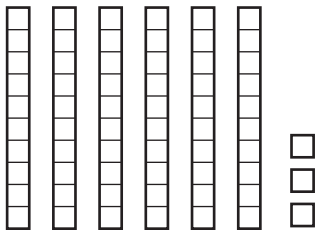
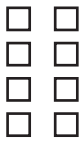
Home Connection 47 Activity (cont.)

Money, Fraction & Decimal Showdown Cards page 3 of 5

Label each card and then cut out all the cards.



HC 47 Money, Fraction & Decimal Showdown Card



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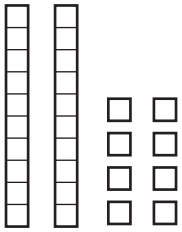

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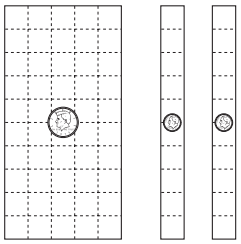

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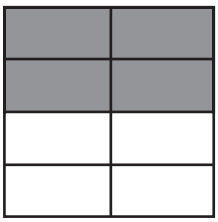

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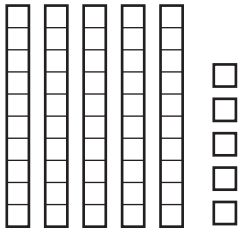
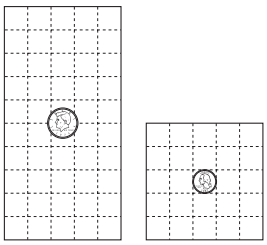


HC 47 Money, Fraction & Decimal Showdown Card



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HC 47 Money, Fraction & Decimal Showdown Card

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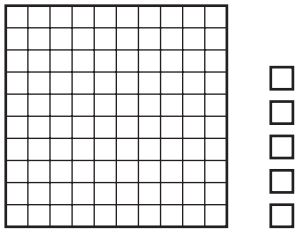
Home Connection 47 Activity (cont.)

Money, Fraction & Decimal Showdown Cards page 4 of 5

Label each card and then cut out all the cards.



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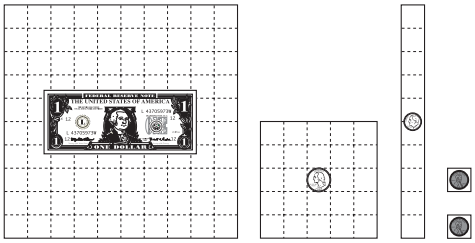

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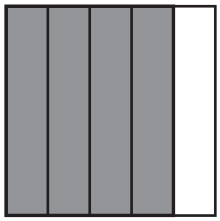
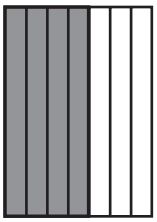


HC 47 Money, Fraction & Decimal Showdown Card



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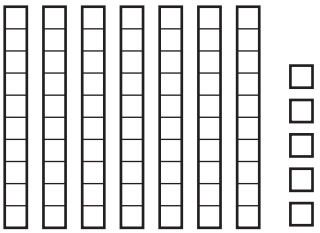

HC 47 Money, Fraction & Decimal Showdown Card

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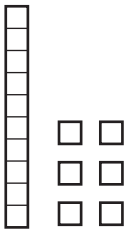

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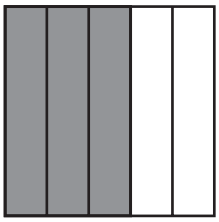

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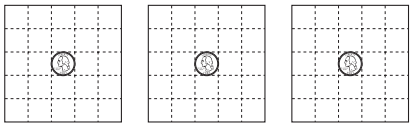
Home Connection 47 Activity (cont.)

Money, Fraction & Decimal Showdown Cards page 5 of 5

Label each card and then cut out all the cards.



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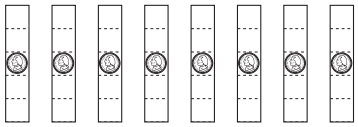

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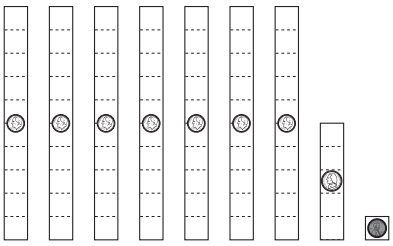
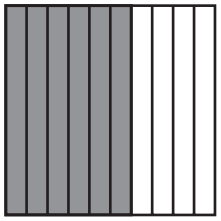


HC 47 Money, Fraction & Decimal Showdown Card



HC 47 Money, Fraction & Decimal Showdown Card

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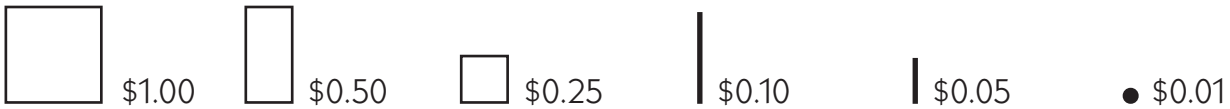
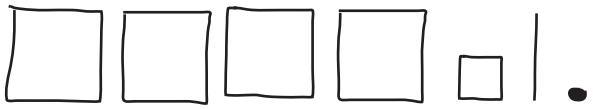
Home Connection 48 ★ Worksheet

Adding Money & Decimals

On this page, you will be sketching money value pieces. Use the key below as a guide for your quick sketches.



1 For each amount below, sketch the collection in money value pieces.

Amount	Your Sketch
example $4.36	
a $1.25	
b $0.81	
c $5.40	
d $2.07	
e $0.55	
f $3.96	

(Continued on back.)

Home Connection 48 Worksheet (cont.)

2 Mike bought hot chocolate for his little sister, his father, and himself. He got a small cup for his sister for $2.05, a large cup for his dad for $2.75, and a medium cup for himself for $2.70. How much did Mike pay for the three drinks? Use words, numbers, and pictures to explain how you got your answer.

CHALLENGE

3 Circle two of the amounts below.

$5.40 $0.41 $0.55 $1.25 $2.07 $3.46

a Write a story problem involving those amounts.

b Draw a quick sketch showing how you would solve your problem using base ten or money value pieces.

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NAME _____ **DATE** _____

Home Connection 49 ★ Worksheet

Decimal Problems

1 Use each number below only once to fill in the blanks in the story so that it makes sense.

16.56 5.2 8.28

The hiking trail was _____ miles long. After hiking _____ miles, more than halfway to the end of the trail, Whitney stopped to have lunch. When she got to the end of the trail, Whitney turned around and hiked the whole way back, a total of _____ miles.

2 Insert a decimal point in each number to make the equation true.

3 9 + 3 9 5 = 7 8 5

3 Dario wanted to buy a used video game. Last week, the video game store had a copy for sale for $8.95. When Dario came back this week, the store had a different copy of the same game priced at $9.65.

a How much more does this copy of the game cost than the one from last week?

b If Dario pays for the game this week with a $10 bill, how much change will he get back?

(Continued on back.)

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Home Connection 49 Worksheet (cont.)

4 Isabel's class hatched some baby chicks. Isabel is keeping this table of how much one chick grows each week.

Chick's Weight Table	
Weight at the end of week	Weight (in grams)
week 0 (at hatching)	6.85
week 1	8.63
week 2	10.76
week 3	12.65

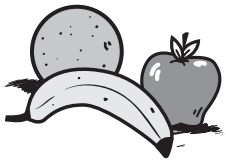
a During which week did the chick gain the most weight? How can you tell?

b How much weight did the chick gain that week?

5 Malik was on a car trip with his family. They stopped at the gas station, and these snacks were for sale.

Juice
$1.65

Granola Bar
$0.85



Fruit
$0.55

5 (cont.) Malik's mom gave him $5.00 to buy snacks. When he came back to the car, he gave his mom $0.55 in change. What did he buy? (He did buy more than 1 of some items.)

CHALLENGE

6 Hiroko added 4.5 and 6.83 together and subtracted the total from 14.

a Write a story problem that Hiroko could have been solving.

b What was her answer?

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