



and fractions they have modeled.

- Guide students to plot each of the decimals on a number line and to write the equivalent fraction below each plotted point.

$\frac{1}{2}$	$0.\overline{3}$	50	20
368	$9\frac{3}{5}$	34	$3\frac{1}{2}$
$8\frac{1}{4}$	$\frac{17}{20}$	$4\frac{1}{5}$	368
34	23	3.45	$9\frac{1}{5}$
	50		

You want if you are the first to get four connected rectangles like . Play again!

>	<	>	<
<	=	>	>
>	=	>	>

You want if you are the first to get four connected rectangles like . Play again!

**Report Back** To check understanding, ask a student to repeat and complete this sentence:  $\frac{1}{2}$  is equivalent to the decimal 0.2, so the equivalent decimal for  $\frac{3}{5}$  and  $\frac{1}{4}$  are [0.4, 0.6, and 0.8].

### Levelled Homework

#### Repeating Master

Repeating  
13-4

#### Fractions and Decimals




Any fraction that has a denominator of 10 or 100 can be written as a decimal. Tenths and hundredths are written as digits to the right of the decimal point. The shaded part is  $\frac{2}{10}$  of the whole area. Write it as a decimal: 0.2

Say: two tenths.

The shaded part is  $\frac{13}{100}$  of the whole area. Write it as a decimal: 0.13

Say: thirteen hundredths.



- Write a fraction and a decimal to tell how much is shaded.  
 8; 0.8
- How are they different? They show equal areas. One shows tenths and the other shows hundredths.  
 80; 0.80
- How are they different? They show equal areas. One shows tenths and the other shows hundredths.  
 9; 0.9




- Write each fraction as a decimal
4.  $\frac{3}{10}$     5.  $\frac{6}{10}$     6.  $\frac{7}{100}$     7.  $\frac{22}{100}$     0.27
- 0.3
- Write each decimal as a fraction in its simplest form.
8. 0.40    9. 0.76    10. 4.8    11. 0.07    7
- 2    25    45    100

Also available in print

#### Practice Master

Practice  
13-4

#### Fractions and Decimals

- Write a fraction and a decimal to show how much is shaded.
-  22; 0.22
  -  7; 0.7
  -  3; 0.03
- Draw a model that shows each decimal.
- 0.16
  - 1.17
  - 0.78

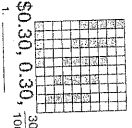
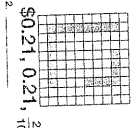
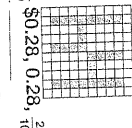
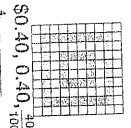
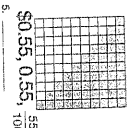
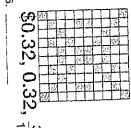
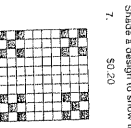
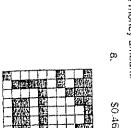
- Write each fraction as a decimal.
7.  $\frac{7}{100}$     8.  $\frac{9}{10}$     9.  $\frac{6}{10}$     10.  $\frac{17}{100}$     0.17
- 0.01    9.4    0.6
- Write each decimal as a fraction in its simplest form.
11. 0.5    12. 0.79    13. 0.3    14. 3.69    35
- 2    10    10
15. In the decimal models, how many strips equal 10 small squares?  
A. 70 strips    B. 10 strips    C. 7 strips    D. 1 strip
16. Writing to Explain Explain the steps you would take to write  $\frac{6}{10}$  as a decimal. First, make it a mixed number,  $3\frac{6}{10}$ . The fraction becomes 0.6, so  $3\frac{6}{10} = 3.6$ .

Also available in print

#### Shady Spots

Enrichment  
13-4

Each grid stands for one dollar. Draw shaded designs to show. Write your answer as a money amount, a decimal, and a fraction.

-  \$0.30, 0.30,  $\frac{30}{100}$
-  \$0.21, 0.21,  $\frac{21}{100}$
-  \$0.28, 0.28,  $\frac{28}{100}$
-  \$0.40, 0.40,  $\frac{40}{100}$
-  \$0.55, 0.55,  $\frac{55}{100}$
-  \$0.32, 0.32,  $\frac{32}{100}$
-  \$0.20
-  \$0.16

Answers will vary. Sample answers are shown.

Also available in print

- Write the name of the number as a fraction and as a decimal.
- Continue to invite volunteers to locate different numbers on the number line. Have students write the number as a fraction and as a decimal.

a	b	c	d	e
f	g	h	i	j

Make up a number line puzzle. Ask your partner to display the answers with 0 - 9 tiles.

a	b	c	d	e
f	g	h	i	j

Make up a number line puzzle. Ask your partner to display the answers with 0 - 9 tiles.

**Partner Talk** Listen for language that describes a strategy. For example, a student might say, "To find where  $\frac{2}{10}$  is on the line, I first go to the interval that begins with 2 and then count 9 out of the 10 equal spaces in that interval."

### Levelled Homework

#### Reaching 13-5

##### Fractions and Decimals on the Number Line

How do you locate fractions and decimals on a number line?

Show  $\frac{1}{8}$  on a number line. Draw a number line and label 0 and 1. Divide the distance from 0 to 1 into 8 equal lengths.

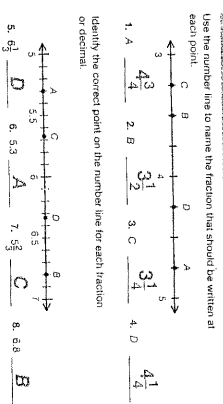
Label  $0, \frac{1}{8}, \frac{2}{8}, \frac{3}{8}, \frac{4}{8}, \frac{5}{8}, \frac{6}{8}, \frac{7}{8}$ , and 1. Draw a point at  $\frac{3}{8}$ .

Show  $0.2$  on another number line. Draw another number line and label 0 and 1. Divide the distance from 0 to 1 into 10 equal lengths.

Label  $0.1, 0.2, 0.3, 0.4$ , and so on. Use the number line to name the fraction that should be written at each point.

1. A  $\frac{4}{10}$  2. B  $\frac{3}{10}$  3. C  $\frac{3}{10}$  4. D  $\frac{4}{10}$

Identify the correct point on the number line for each fraction or decimal.

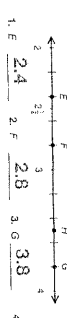


Also available in print

#### Practice Master 13-5

##### Fractions and Decimals on the Number Line

Use the number line to name the fraction or decimal that should be written at each point.



1. E  $\frac{2}{10}$  2. F  $\frac{2}{10}$  3. G  $\frac{3}{10}$  4. H  $\frac{3}{10}$

Identify the correct point on the number line for each fraction or decimal.

5. 8.3 B 6.  $\frac{7}{10}$  C 7. 7.7 A 8. 8.2 D

9. Eamon used a number line to compare two numbers. 0.48 and  $\frac{1}{2}$ . One number was less than  $\frac{1}{2}$  and the other number was greater than  $\frac{1}{2}$ . Which number was less than  $\frac{1}{2}$ ? 0.48

10. Writing to Explain: Jaime says that 0.45 is equal to  $\frac{4}{10}$ . Is she correct? Explain.

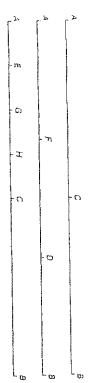
Sample answer: No, she is incorrect because  $\frac{4}{10}$  is equal to 0.4 and 0.45 is not equal to 0.4.

Also available in print

#### Fundament 13-5

##### A New Measure

Distance AB is a new measurement called a pitugel.



Write the fractional part of a pitugel.

1. Distance AB  $\frac{1}{10}$  pitugel

2. Distance AE  $\frac{2}{10}$  pitugel

3. Distance EC  $\frac{2}{10}$  pitugel

4. Distance GB  $\frac{2}{10}$  pitugel

Write the decimal part of a pitugel.

5. Distance AG 0.25 pitugel

6. Distance CG 0.5 pitugel

7. Distance DG 0.25 pitugel

8. Distance AC 0.5 pitugel

Also available in print

What denominators can be multiplied by a number to get an equivalent fraction with a denominator of 10? [2, 5] Make a list as students name the denominators. Work together to change  $\frac{1}{2}$  to  $\frac{5}{10}$  to 0.5.

Repeat for hundredths. Have students name a few denominators for hundredths.

One Whole

0/4	0/5	0/8	0/7	0/6
0/5	0/25	0/7	0/9	0/75

Take turns. Say an fraction that fits in the denominator. Write an equivalent decimal in hundredths.

One Whole

3/4	6/20	1/4	3/5	4/5
1/5	9/10	3/20	2/5	1/2

Try again. This time say the equivalent fraction in the grid and another equivalent fraction for each decimal.

**Partner Talk** Listen for names of equivalent decimals. For example, a student might say, "Two tenths is equivalent to twenty hundredths because there are ten hundredths in every tenth."

### Ratifying Master

Name \_\_\_\_\_ Remaining 13-6

#### Equivalent Fractions and Decimals

A fraction and a decimal can both be used to represent the same value. Write  $\frac{6}{10}$  as a decimal.

Step 1 Write the numerator over a denominator of 10.  $\frac{6}{10} = \frac{6}{10}$

Step 2 Rename the fraction using a denominator of 100 or 1,000. Think: What number times 10 is 100?  $\frac{6}{10} = \frac{60}{100}$

Step 3 Write the decimal.  $\frac{60}{100} = 0.6$



In 1 through 4, find the missing numbers. Then write each fraction as a decimal.

1.  $\frac{1}{10} = \frac{\square}{25}$  2.  $\frac{2}{50} = \frac{\square}{45}$  3.  $\frac{3}{10} = \frac{1}{\square}$  5: 2  $\frac{4}{5} = \frac{\square}{32}$

$0.25$   $0.45$   $0.2$   $0.32$

Write each fraction as a decimal.

5.  $\frac{5}{10}$  6.  $\frac{6}{10}$  7.  $\frac{7}{10}$  8.  $\frac{8}{10}$  9.  $\frac{9}{10}$

$0.8$   $0.08$   $0.16$   $0.65$   $0.18$

Try whether each pair shows equivalent numbers.

10.  $\frac{2}{5}$  0.25 11.  $\frac{30}{100}$  0.4 12.  $\frac{3}{5}$  0.35 13.  $\frac{40}{100}$  0.35

No Yes No Yes

14. One end of  $\frac{15}{10}$  of the people at the skating rink brought their own skates. Write an equivalent decimal for  $\frac{15}{10}$ .  $0.6$

Also available in print

### Practice Master

Name \_\_\_\_\_ Practice 13-6

#### Equivalent Fractions and Decimals

In 1 through 5, write each fraction as a decimal.

1.  $\frac{1}{10}$  2.  $\frac{2}{10}$  3.  $\frac{3}{10}$  4.  $\frac{4}{10}$  5.  $\frac{5}{10}$

0.2 0.75 0.44 0.95 0.46

In 6 through 9, tell whether each pair shows equivalent numbers.

6.  $\frac{6}{10}$  0.5 7.  $\frac{7}{10}$  0.07 8.  $\frac{8}{10}$  0.25 9.  $\frac{9}{10}$  0.22

No No Yes Yes

10. A city band has 5 members. 2 of the members are girls. So, the band has  $\frac{2}{5}$  of the members who are girls. Write  $\frac{2}{5}$  in simplest form and find an equivalent decimal.

Yes:  $\frac{2}{5} = 0.4$

11. Kenny has 20 words to learn for his spelling test on Friday. He has learned 6 of the words. So, he has learned  $\frac{6}{20}$  of the words. Write  $\frac{6}{20}$  in simplest form and find an equivalent decimal.

Yes:  $\frac{3}{10} = 0.3$

12. Which decimal is equivalent to  $\frac{3}{5}$ ?

A 0.20 B 0.35 C 0.35 D 0.52

Yes:  $\frac{4}{5} = 0.8$  and  $0.8 > 0.75$ .

13. Gina wrote that  $\frac{1}{5}$  is greater than 0.75. Is Gina correct? Explain why or why not.

Yes:  $\frac{4}{5} = 0.8$  and  $0.8 > 0.75$ .

14. Look at Exercise 8. Explain how you decided whether the numbers are equivalent.

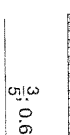
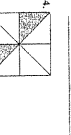
Sample answer: I renamed  $\frac{4}{16}$  as  $\frac{1}{4}$ . Next, I multiplied the numerator and denominator by 25:  $\frac{1}{4} = \frac{25}{100}$  and  $\frac{4}{16} = \frac{25}{100}$ .

Also available in print

### Visualize Fractions and Decimals

Name \_\_\_\_\_ Equivalent 13-6

Write a fraction in simplest form and a decimal for the shaded part of each shape.



Shade some parts of each shape below. Write a fraction in simplest form and a decimal to represent the shaded part of the shape.

Answers may vary. Check students' work.

Answers may vary. Check students' work.

Also available in print

a whole number.  $10^3$  and  $10^4$  represents a value less than one (54). Have students shade grids to represent 3.54.

- Remind students that the ones place represents one whole, which corresponds to the grids that are completely shaded.
- Have students say the word form aloud, to help them think through the values, and write it.

### Reteaching Master

Name \_\_\_\_\_ Reteaching 13-7

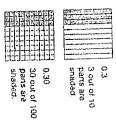
#### Decimal Place Value

A grid can be used to show tenths and hundredths. To show 0.3, you would shade 3 out of the 10 parts.

To show 0.30, you would shade 30 out of the 100 parts.

One part of the hundredths grid can be compared to a penny, since one part of the grid is equal to 0.01 and a penny is equal to one hundredth of a dollar.

Tenths and hundredths are related. In the above examples, 3 tenths or 30 hundredths of the grids are shaded, or 0.3 and 0.30. These numbers are equal:  $0.3 = 0.30$ .



Write the word form and decimal for each shaded part.

- One tenth; 0.1
- Five tenths; 0.5
- 0.57
- 0.4

5. Number Sense Which is greater, 0.4 or 0.41? Explain.  
**Sample answer:** 0.4 is greater because 0.4 is four tenths, or four dimes, and 0.04 is four hundredths, or four pennies.

Also available in print

## Levelled Homework

**1** Which bar or coin would each base ten block represent?

One whole One tenth One hundredth

**2** Repeat the activity. What if the decimal you display is an amount of money? Which bar or coin would each base ten block represent?

**STEP 2** Say the second number. Repeat the activity. Find the number of ones, tenths, and hundredths in the second number.

**STEP 3** Find and say a number that is between the numbers you chose.

**STEP 4** Find and say another number that is between the numbers you chose.

Repeat the activity. What if the decimal you display is an amount of money? Find several amounts of money that are between those two amounts of money.

One tenth

### Practice Master

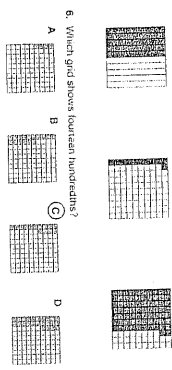
Name \_\_\_\_\_ Practice 13-7

#### Decimal Place Value

- Write the word form and decimal for each shaded part.
- Four tenths; 0.4
  - Thirty-four hundredths; 0.34

For each fact, shade a grid to show the part of the population of each country that lives in cities.

- In Jamaica, 0.3
- Only 0.11 of the population of Uganda lives in cities.
- In Norway, 0.72 of the population lives in cities.



6. Which grid shows fourteen hundredths?  
 A B C D

7. Writing to Explain Explain why one column in a hundredths grid is equal to one column in a tenths grid.  
**Sample answer:** One column in a hundredths grid is equal to 0.10, which is also equal to 0.1.

Also available in print

### Decimal Patterns

Name \_\_\_\_\_ Enrichment 13-7

- Write the next two numbers in each pattern.
- 0.2, 0.4, 0.6, 0.8, 1.0
  - thirty-three hundredths, thirty-four hundredths, thirty-five hundredths, thirty-six hundredths, thirty-seven hundredths
  - 1.7, 1.8, 1.9, 2.0, 2.1
  - fourteen hundredths, sixteen hundredths, eighteen hundredths, twenty hundredths, twenty-two hundredths
  - 1.27, 1.24, 1.21, 1.18, 1.15, 1.12, 1.09
  - two tenths, twenty hundredths, three tenths, thirty hundredths, four tenths, forty hundredths, five tenths
  - 1.45, 1.4, 1.35, 1.3, 1.25, 1.2, 1.15
  - three tenths, six tenths, nine tenths, one and two tenths, one and four tenths, one and eight tenths, two and one tenth
  - five tenths, forty-five hundredths, four tenths, thirty-five hundredths, three tenths, twenty-five hundredths, two tenths
  - 2.2, 2.0, 1.8, 1.6, 1.4, 1.2, 1.0
  - 0.09, 0.14, 0.19, 0.24, 0.29, 0.34, 0.39
  - thirty-seven hundredths, thirty-three hundredths, twenty-nine hundredths, twenty-five hundredths, twenty-one hundredths, seventeen hundredths, thirteen hundredths

Also available in print

- Groups make a large place-value chart on poster board with 3 empty rows. Students write individual digits of each number on index cards.
- Have students align index cards in corresponding place values and compare them from left to right.
- Ask students to compare methods for ordering decimals and whole numbers.

**Levelled Homework**

**One whole**  
Repeat the activity using each number you display as amount of minutes in decimals and cells.

**One tenth**  
Repeat the activity using each number you display as amount of minutes in tenths and cells.

**One hundredths**  
Repeat the activity using each number you display as amount of minutes in hundredths and cells.

**Report Back** Ask a student to repeat and complete this sentence: One hundredths is the first place where the digits are different!

**Do We Decimals?**

In many places, professional bodies are placed on shelves in order according to the Dewey Decimal System. Help the student decide which to put the section where their returned report should be placed. Then write the exact place where each book should be shelved. The first book has been done for you.

Book	Number	Place
1	109.7	PP: Between 107.31 and 110.09
2	192.06	PP: Between 151.9 and 182.09
3	042.19	G: Between 042.1 and 042.9
4	006.8	G: Between 003.1 and 027.4
5	503.54	SM: Before 510.10
6	560.06	SM: Between 521.3 and 550.11
7	813.12	L: Between 812.4 and 813.21
8	107.05	PP: Between 102.2 and 107.31
9	886.9	L: After 886.89
10	657.01	SM: Between 656.12 and 657.1
11	587.21	SM: Between 587.09 and 587.22
12	122.9	PP: Between 122.05 and 122.96

**Practice Master**

Name \_\_\_\_\_

13-8

**Comparing Decimals**

Compare 0.87 to 0.89  
First, begin at the left. Find the first digit where the numbers are different.

0.87  
0.89

The numbers are the same in the tenths place, so look to the next place.

The first place where the numbers are different is the hundredths place. Compare 7 to 9.

$0.07 < 0.09$ , so  $0.87 < 0.89$

Compare  $>$ ,  $=$ , or  $<$  for each

1.  $0.36 < 0.76$       2.  $5.1 > 5.01$       3.  $1.2 = 1.20$

4.  $6.55 < 6.6$       5.  $0.62 < 0.62$       6.  $4.71 > 4.17$

Order the numbers from least to greatest.

7. 1.36, 1.3, 1.63      8. 0.42, 3.74, 3.47

9. 6.06, 6.41, 6.6      10. 0.3, 0.13, 0.19, 0.31

4.6, 6.41, 6.46      0.42, 3.47, 3.74

11. Number sense: Which is greater, 8.0 or 8.7? Explain.  
Sample answer: 8.0 is greater because the 8 is in the ones place instead of the tenths place. Ones are a larger value than tenths.

Also available in print

**Practice Master**

Name \_\_\_\_\_

13-8

**Comparing Decimals**

Compare  $>$ ,  $=$ , or  $<$  for each

1.  $0.31 < 0.31$       2.  $1.9 > 0.95$       3.  $0.08 < 0.1$

4.  $2.70 = 2.7$       5.  $0.81 > 0.79$       6.  $2.12 < 2.21$

Order the numbers from least to greatest.

7. 0.37, 0.41, 0.31      8. 1.16, 1.61, 6.11

9. 7.9, 7.91, 7.99, 7.9      10. 1.46, 1.76, 1.47, 1.67

7.09, 7.19, 7.9, 7.91      1.45, 1.47, 1.67, 1.76

11. Which cat has the greatest weight?  
Tigger

12. Which cat weighs the least?  
Sophie

13. Which group of numbers is ordered from least to greatest?  
A. 0.12, 1.51, 0.65  
B. 5.71, 5.4, 0.34  
C. 0.4, 0.95, 0.11  
D. 0.05, 0.51, 1.5

14. Writing to Explain: Ursula put the numbers 7.25, 7.52, 5.72, and 5.27 in order from greatest to least. Is this work correct? Explain.  
Sample answer: No; 7.52 is greater than 7.25, so they should be in reverse order.

Also available in print

**Practice Master**

Name \_\_\_\_\_

13-8

**Do We Decimals?**

In many places, professional bodies are placed on shelves in order according to the Dewey Decimal System. Help the student decide which to put the section where their returned report should be placed. Then write the exact place where each book should be shelved. The first book has been done for you.

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10	657.01	SM: Between 656.12 and 657.1
11	587.21	SM: Between 587.09 and 587.22
12	122.9	PP: Between 122.05 and 122.96

Also available in print

\$14.89, model the problem with money, and fill in a place-value chart.

- Students should notice that the values in the place-value chart are also the number of pennies, dimes, and dollars (and the same as their predictions, if correct).

Remind them that the term "hundredth" relates to a penny, as 100 pennies make up a whole (a dollar); similarly for "tenth" as in ten dimes to a dollar.

\$3.12	\$2.24	\$4.03	\$1.03
\$2.04	\$3.04	\$2.31	\$4.13
\$3.30	\$1.30	\$3.04	\$2.24
\$4.03	\$3.10	\$2.04	\$3.30

\$3.02	\$2.00	\$3.21	\$3.00
\$1.00	\$2.03	\$2.30	\$2.13
\$2.30	\$3.00	\$2.30	\$2.31
\$2.03	\$2.31	\$3.21	\$3.20

### Labeled Homework

Report Back To check understanding, ask a student to repeat and complete this sentence: A \_\_\_\_\_ is hundredths of a dollar [penny]

#### Reaching Mastery

Name \_\_\_\_\_ Reaching 13-9

#### Using Money to Understand Decimals

We can use money to understand decimals. For example, a dime is one-tenth of a dollar, or 0.1. It takes ten dimes to equal a dollar. 100 pennies to equal one dollar.

\$0.01	\$0.05	\$0.10	\$0.25	\$0.50
0.01	0.05	0.1	0.25	0.5

The decimal point is read by saying "and." So, \$1.99 is read as "one dollar and ninety-nine cents."

- \$3.52 = 3 dollars + 5 dimes + 2 pennies
- \$1.87 = 1 dollar + 8 dimes + 7 pennies
- Number Sense Write nine and thirty-six hundredths with a decimal point. 9.36

How could you use only dollars, dimes, and pennies to buy **Sample answers.**

- the baseball? 3 dollars, 9 dimes,
- the baseball bat? 8 dollars, 4 dimes,
- pennies 9 pennies

Also available in print

#### Practice Master

Name \_\_\_\_\_ Practice 13-9

#### Using Money to Understand Decimals

- 2.18 = 2 ones - 1 tenth - 8 hundredths
- \$2.18 = 2 dollars - 1 dime + 8 pennies
- \$3.27 = 3 ones - 2 tenths - 7 hundredths
- \$9.27 = 9 dollars - 2 tenths - 7 hundredths
- \$7.39 = 7 dollars + 3 dimes + 9 pennies
- Number Sense Write 3 dollars, 9 dimes, and 5 pennies with a dollar sign and decimal point. \$3.95
- Number Sense If you have 5 dimes and 9 pennies, how much money do you have? \$0.59
- Lena wants to buy a book for \$5.95. How can she pay for the book using only dollars, dimes, and nickels? 5 dollars, 9 dimes, 1 nickel
- How would you write sixteen and twenty-five hundredths with a decimal point?  
A. 16.025    B. 16.25    C. 162.5    D. 1.625

- Writing to Explain Which is greater, 4 tenths and 2 hundredths or 2 tenths and 4 hundredths? Explain. Four tenths and 2 hundredths is greater because it has more tenths than the other number.

Also available in print

Name \_\_\_\_\_ Enrichment 13-9

#### Similar Shapes

Look at the group of shapes on the left and find something that all of the shapes in the group have in common. Then, circle the shape on the right that belongs in the group.

- 
- 
- 
- 

Also available in print

me midpoint U.2.

- Display the following numbers: 0.6, 0.4, 0.9, and 0.7.
- Have students write the numbers in order from least to greatest.
- Ask students to talk about the relationship between the numbers.
- Work together to write the numbers in the correct order on the number line.

### Reaching Mastery

Name \_\_\_\_\_ Reaching 1.3-10

#### Problem Solving: Draw a Picture

A fence is 20 ft long. It has posts at each end and at every 4 ft along its length. How many fence posts are there?

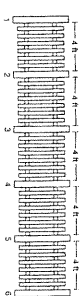
#### Read and Understand

Step 1: What do you know?

Step 2: What are you trying to find?

#### Plan and Solve

Step 3: What strategy will you use?



There are 6 fence posts altogether.  
Step 4: To your work answer?

**Look Back and Check**  
Yes, the picture shows that there is a total of 6 fence posts.  
Solve the problem. Write the answer in a complete sentence.  
1. Tim, Kara, and Jim are working together to write a 4-page report. Each student is going to do an equal amount of writing. What fraction of the entire report does each student need to write?  
**Each student needs to write  $\frac{1}{3}$  page.**

Also available in print

**Partner Talk** Listen for the word label. For example, a student might say, "We didn't label every part of the picture yet."

1. The perimeter of a square is 60 units. What is the length of each side of the square?  
2. Each box contains 2 pounds of pasta. How many boxes can you prepare with 20 pounds of pasta?  
3. A garden requires 3 pounds of seeds. How many gardens can you make if you have 10 feet of seedling?

4. A garden requires 12 pounds of seeds. How many gardens can you make if you have 10 feet of seedling?

Make up a problem that can be solved by drawing a picture. Ask your team to complete steps 1–4 to solve your problem.

### Level 1 Homework

#### Practice Master

Name \_\_\_\_\_ Practice 1.3-10

#### Problem Solving: Draw a Picture

Solve each problem. Write the answer in a complete sentence.

1. Three friends divided a veggie pizza into 12 slices. If they divide the pizza equally, what fraction of the pizza would each friend get?  
**Each friend gets  $\frac{4}{12}$  (or  $\frac{1}{3}$ ) of the pizza.**

2. Mark is making a quilt with his grandmother. Each row of the quilt has 6 squares. There are 8 rows of the squares.  
**There are 48 squares in the quilt.**

3. Jane pulled weeds in the garden 7 times. She was paid \$5 each time she pulled weeds for less than 1 hour and \$8 each time she pulled weeds for more than 1 hour.  
**Jane pulled weeds for more than 1 hr 4 times.**

4. Nail needs to cut 3 long boards into 9 smaller boards. The first is 10 ft, the second is 16 ft, and the third is 18 ft. The table lists the smaller boards their needs. Use a drawing to show how the can divide the 3 boards so that the boards are given.

Length of Board	Number Needed
5 ft	3
5 ft	4
6 ft	2

Also available in print

1. The length of a rectangle is 8 inches and the width of the rectangle is half the length. What is the perimeter of the rectangle?

2. A garden requires 3 pounds of seeds. How many gardens can you make if you have 10 feet of seedling?

3. A garden requires 12 pounds of seeds. How many gardens can you make if you have 10 feet of seedling?

4. If the first Thursday in September is September 3rd, what is the date on the first Friday in that month?

Make up a problem that can be solved by drawing a picture. Ask your team to complete steps 1–4 to solve your problem.

Name \_\_\_\_\_ Enrichment 1.3-10

#### Picture Patterns

Use the pictures to find the pattern. Then complete the table.

1.

Number of dots	1	2	3	4	5
Number of squares	2	4	8	16	32
Fraction for one part	$\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{8}$	$\frac{1}{16}$	$\frac{1}{32}$

2.

Number of cubes	A	B	C	D	E
Number of cartons	1	3	9	27	81
Fraction for one carton	1	$\frac{1}{3}$	$\frac{1}{9}$	$\frac{1}{27}$	$\frac{1}{81}$

3.

Figure	A	B	C	D	E
Number of squares	2	4	6	8	10
Fraction of shaded squares	$\frac{1}{2}$	$\frac{2}{4}$	$\frac{3}{6}$	$\frac{4}{8}$	$\frac{5}{10}$

Also available in print

Then ask students to estimate how many times the yardstick could be laid end-to-end across the room.

Have students test both estimates.

**How many pencils would fit end-to-end across the room? Why wouldn't you want to measure the room using a pencil?**

**ELD Report Back** To check understanding, ask a student to repeat and complete this sentence: *The distance in options has in one day is measured in \_\_\_\_\_ [Miles]*

miles	feet	inches	feet
feet	inches	feet	miles
inches	miles	yards	inches
feet	yards	inches	miles

between 90 and 120 yards	between 29,000 and 29,500 feet	between 29,850 and 29,900 miles	between 8 and 10 feet
between 200 and 230 miles	between 9 and 12 inches	between 1,300 and 1,410 yards	between 16 and 22 inches
between 16 and 22 inches	5 inches	between 7 and 9 feet	between 2,780 and 2,800 miles
between 7 and 9 feet	between 21,850 and 24,900 miles	between 1,390 and 1,410 yards	between 29,000 and 29,500 feet

**Reaching Master**

Name \_\_\_\_\_ Reaching 14-1

**Customary Units of Length**

Unit: inch  
 Example: width of a U.S. quarter  
 1 foot (ft) = 12 inches (in.)  
 1 yard (yd) = 3 feet  
 1 mile (mi) = 5,280 feet

How to measure an object:  
 To measure an object, make sure one end of the object begins at the zero unit.



The rectangle is closest to the 2 in. mark, so we can say the rectangle is 2 in. long to the nearest inch.

Choose the most appropriate unit to measure the length of each. Write in, ft, yd, or mi.

1. cell in.                      2. like mi.  
 3. hallway ft.                      4. basketball court yd.

Estimate first. Then, find each length to the nearest inch.

5. \_\_\_\_\_ 1 in.  
 6. \_\_\_\_\_ 1 in.

Also available in print

**Levelled Homework**

**Practice Master**

Name \_\_\_\_\_ Practice 14-1

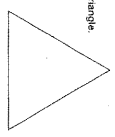
**Customary Units of Length**

Choose the most appropriate unit to measure the length of each. Write in, ft, yd, or mi.

1. boat ft.                      2. waist in.  
 3. soccer field yd.                      4. finger bandage in.  
 5. computer cable ft.                      6. rain route mi.  
 7. nose in.                      8. sea mi.

Estimate first. Then, measure each length to the nearest inch.

9. \_\_\_\_\_ 2 in.  
 10. \_\_\_\_\_ 1 in.



11. Use a ruler to find the length of one side of the triangle. The perimeter is 6 in.

12. Eileen needs 8 feet of fabric to make a skirt. She can make 2 skirts.

13. Which unit would be most appropriate for measuring the length of a hair?  
 A. inches                      B. pounds                      C. yards                      D. miles

14. Writing in English. English has you would decide which unit is best for measuring your math book.  
Sample answer: Because the math book is not very large, I would use inches.

Also available in print

**Reaching Master**

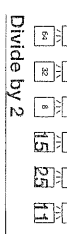
Name \_\_\_\_\_ Reaching 14-1

**Mystery Machines**

Figure out the mystery in each machine below. A number goes in and another number goes out. Find what happens to the number. Write down each pattern. Then fill in the blank boxes.

1. 108 → 54    15 → 30    30 → 22

64 → 22    22 → 8    15 → 25    14



Divide by 2

2. 44 → 22    51 → 25    30 → 15    53 → 26    57

Add 47

Also available in print



Ask students to determine a range of estimates and then to narrow these down to one "best estimate."

- Use the container students selected, fill it with water, and pour it repeatedly into the other container, counting as you do so. Check students' estimates with the actual capacity.
- Repeat this process with other containers if possible.

Play again! Describe a container that has the capacity you choose.

1 quart	1 quart	1 quart	1 quart	1 quart
1 cup	1 gallon	1 pint	1 quart	1 quart
1 gallon	1 quart	1 pint	1 quart	1 quart
1 quart	1 cup	1 gallon	1 quart	1 quart
1 cup	1 gallon	1 pint	1 quart	1 quart

Play again! Talk about your strategies as you play.

1 quart	1 quart	1 quart	1 quart	1 quart
1 cup	1 gallon	1 pint	1 quart	1 quart
1 gallon	1 quart	1 pint	1 quart	1 quart
1 quart	1 cup	1 gallon	1 quart	1 quart
1 cup	1 gallon	1 pint	1 quart	1 quart

### Leveled Homework

#### Repeating Master

Repeating 14-2

Name \_\_\_\_\_

#### Customary Units of Capacity

Capacity is the amount that a container can hold. Capacity is measured in teaspoons, tablespoons, fluid ounces, cups, pints, quarts, and gallons, from smallest to largest.

There are 2 cups in a pint.  
There are 2 pints in a quart.  
There are 4 quarts in a gallon.

Choose the most appropriate unit or units to measure the capacity of each. Write # oz., c, pt, qt, or gal.

- water bottle pt
- bathtub gal
- milk carton qt
- coffee pot c
- teacup c or fl oz
- jug of juice gal

7. Reasoning Would a cup be a good tool for measuring the amount of water in a bathtub? Explain why or why not.  
**Sample answer: No, a cup is very small, and a bathtub holds gallons of water.**

8. Are there more or less than 5 pt of \_\_\_\_\_? More than 5 pt  
9. Are there more or less than 5 gal of \_\_\_\_\_? Less than 5 gal

#### Practice Master

Practice 14-2

Name \_\_\_\_\_

#### Customary Units of Capacity

Choose the most appropriate unit or units to measure the capacity of each. Write # oz., c, pt, qt, or gal.

- teacup fl oz
- juice box c or fl oz
- refrigerator qt
- saft in a recipe tspt or tbspt
- carton of cream gal
- large watering can qt

7. Number Sense Would a teaspoon be a good way to measure the capacity of a milk carton? Explain.  
**No: Sample answer: A carton of milk is large. It would take a long time to measure it with a teaspoon.**

8. A jug for the baseball team holds 50 gal of water. To make an energy drink, 1 c of milk is added to every 10 c of water. How many cups of the mix are needed to fill the jug with energy drink?  
10 c of mix

9. Which unit has the greatest capacity?  
A. Teaspoon      C. Pint  
B. Quart          D. Teaspoon

10. Writing to Explain Cassidy says that capacity is the same as the amount. Do you agree? Explain why or why not.  
**No: Sample answer: Capacity is how much a container can hold, not how much is actually in the container.**

#### Enrichment

Enrichment 14-2

Name \_\_\_\_\_

#### Can You Substitute?

Jane is at the grocery store buying items to do her homework. She sees the following ingredients left over.

1. Jane needs 1 pt of sour cream. Which sized container should she buy, and how many does she need to purchase?  
**One 2 c package or two 8 oz containers**

2. Jane needs 16 oz of tomato juice. Which sized container should she buy, and how many does she need to purchase?  
**One 1 pt container**

3. Jane needs 4 c of skim milk. Which sized container should she buy, and how many does she need to purchase?  
**One of the 2 pt or two of the 1 pt**

Also available in print

Also available in print

Also available in print

weight of the object, and read the student's estimate.

Have the student repeat this process with a different object. Make sure the object can be measured in the same units as the previous object. See if the student improves his or her estimate with the second object.

Invite other volunteers to estimate the weights of different objects and test their estimates.

You want to get four connected rectangles. The first is 100 pounds.

80 pounds	2 pounds	160 pounds	4 tons
4 tons	1,000 pounds	48 ounces	2 pounds
160 pounds	100 pounds	8 ounces	1,000 pounds

You want to get four connected rectangles. The first is 100 pounds.

the apples	the potatoes	the apples	the carrots
the potatoes	the apples	the carrots	the apples
the carrots	the potatoes	the apples	the potatoes

**Exit Report Card** To check understanding, ask a student to repeat and complete this sentence: [Weight]

## Levelled Homework

### Practice Master

Name \_\_\_\_\_

Ranking 14-3

Name \_\_\_\_\_

Practice 14-3

Name \_\_\_\_\_

Enrichment 14-3

#### Units of Weight

There are 16 ounces in 1 pound (lb).

You use ounces to weigh things like a paper airplane.

You use pounds to weigh things like a box of books.

You use tons to weigh things like a truck.



Choose the most appropriate unit to measure the weight of each. Write oz, lb, or T.

- car T
- computer lb
- bowling ball lb
- crayon oz
- Tramadoloxax T
- vacuum cleaner lb

8. Would you most likely measure a hat using ounces, pounds, or tons? Explain.  
**Sample answer:** Since hats are very light, you would measure one using ounces.

#### Units of Weight

Choose the most appropriate unit to measure the weight of each. Write oz, lb, or T.

- truck T
- can of vegetables oz
- person lb
- dish lb
- wheel full of rocks T
- cup of flour oz
- box of paper lb
- CD oz

8. Reasoning You've a scale that is used to weigh food for the kitchen. You want to weigh 1 pound of butter. Which unit would you use to measure the weight of the butter?  
**NO!** Sample answer: A scale for food will measure in ounces. Concrete blocks need to be weighed in pounds or tons.

10. Jan wants to weigh her cat. What is the most appropriate unit she should use to weigh the cat: ounces, pounds, or tons?  
Pounds

11. What is the most appropriate unit you would use to measure the weight of a horse?  
Tons

12. Which animal would it be appropriate to measure its weight in ounces?  
 (A) mouse (B) elephant (C) horse (D) cow

13. Writing to Explain Cruz says that there are more ounces in 1 T than there are pounds. Do you agree? Explain.  
**Yes: ounces are smaller than pounds so there are more ounces in 1 T than there are pounds.**

#### Spaghetti Dinner

A spaghetti center is having a spaghetti dinner to raise \$200 for new playground. You are in charge of the budget. The expenses are shown below.

Expense	Amount
Ingredients	\$120
Tables and chairs	\$150
Music	\$15
Refreshments	\$50
Advertising	\$50
Other costs	\$30
<b>Total</b>	<b>\$510</b>

- The center already has \$150 saved for the playground. How much more does the center need?  
\$550
- What are the total expenses for the dinner?  
\$726
- How much money does the community center need to raise to pay the expenses and have enough money for the playground?  
\$1,276
- Sam wants to buy garlic bread from a bakery for \$0.2. If you need 100 slices, how much will you pay?  
\$34
- You expect 200 people to attend the dinner. Does any of the people pay \$0 each, the center will make enough money for the playground. Do you agree? If not, explain and suggest a different price per person.  
**NO! Sample answer:  $200 \times \$6 = \$1,200$ , which is less than needed to cover expenses and pay for the new playground. It should cost \$7 per person to attend the dinner.**

Also available in print

Also available in print

Also available in print

1-cup measuring cup. Can many cups fill the gallon? Ask, How many cups will fill a student gallon? Will the gallon fill 1 pint and 1 quart containers?

**Partner Talk** Listen for an explanation of how to change from one customary unit to another. For example, a student might say, "We have three gallons. There are 4 quarts in every gallon, so we can add 4 + 4 + 4 or we can multiply 3 × 4 to get 12 quarts in all."

$18 + 12 = \square$ ft	$3 \times 36 = \square$ in.	$3 \times 4 = \square$ qt	$5 + 12 = \square$ in.
$4 \times 3 = \square$ ft	$8 \times 2 = \square$ qt	$4 \times 3 = \square$ ft	$6 + 16 = \square$ oz
$3 \times 4 = \square$ qt	$12 \div 3 = \square$ tbsp	$3 \times 8 = \square$ ft oz	$5 \times 3 = \square$ tsp
$6 + 16 = \square$ oz	$18 + 12 = \square$ ft	$4 \times 4 = \square$ s	$3 \times 36 = \square$ in.

**Play Again!** You will play the first to get four connected rectangles. See the directions on page 14.

in.	tsp	mi	gal
yd	oz	tbsp	qt
gal	qt	yd	fl oz
tsp	mi	oz	yd

**Play Again!** You will play the first to get four connected rectangles. See the directions on page 14.

## Leveled Homework

**Reaching 14-4**

Name \_\_\_\_\_

### Changing Customary Units

Here is a table of the customary units of length, capacity, and weight. Use the table to change one customary unit of measure to another.

Length	Capacity	Weight
1 ft = 12 in.	1 tbsp = 3 tsp	1 lb = 16 oz
1 yd = 36 in.	1 qt = 2 cups	1 T = 2,000 lb
1 yd = 3 ft	1 c = 8 fl oz	
1 mi = 5,280 ft	1 p = 2 c	
1 mi = 1,760 yd	1 qt = 2 pt	
	1 gal = 4 qt	

Remember: When converting from lesser to greater units, you divide. When converting from greater to lesser units, you multiply.

Which distance is longer, 100 in. or 10 yd?  
 1 yd = 3 ft, 3 ft (12 in./ft) = 36 in.  
 10 yd (10 ft/yd) = 360 in.  
 360 in. is longer than 100 in., so 10 yd is longer.

1. Which is longer, 6 ft or 70 in.? **6 ft**

2. How many pints is 24 quarts? **48 pt**

3. Which weighs more, 5 lb or 100 oz? **100 oz**

4. If a recipe calls for 2 tbsp, how many tsp is that? **6 tsp**

**Practice Master 14-4**

Name \_\_\_\_\_

### Changing Customary Units

For 1 through 12, compare. Write >, <, or = for each.

1. 1 yd  > ft      2. 40 in.  1 yd

3. 6 qt  > qt      4. 3 lb  30 oz

5. 2 yd  > 6 ft      6. 3 ft  30 in.

7. 1 gal  > 15 c      8. 3 T  3,000 lb

9. 1 mi  > 2,000 yd      10. 100 ft  100 mi

11. 1 gal  > 100 fl oz      12. 3 tbsp  40 tsp

13. Which measurement is NOT equal to 1 mi?  
 A. 1,760 yd      B. 5,280 yd      C. 5,280 ft      D. 63,360 in.

14. Writing to Explain A recipe calls for 4 tsp of baking soda. How many cups of baking soda is that? Explain.

**1 fl oz of vanilla; 4 tsp is equal to 1 1/3 tbsp and 1 fl oz is equal to 2 tbsp.**

**Enrichment 14-4**

Name \_\_\_\_\_

### Splash Splash

Suee runs from the high board. The high board is 9 yards above the water.

1. What is the height of the high board in ft?  
**9 ft**

2. If Suee is 4 ft 8 in. tall, and she stands on the diving board, how many inches are there from the top of Suee's head to the water?  
**164 in.**

3. If Suee jumps off the board feet first, how many inches does she fall when she hits the water? How many feet does she fall?  
**52 in.**

4. When Suee jumps into the water, the splash is 1/3 of the height of the high board. How high is the splash in inches?  
**18 in.**

5. Suee's mother is watching her and is standing 2 ft from the 27 in. high splash. How far away from the pool is her mother?  
**No, 21 in. is less than 2 ft, which is 24 in.**

Also available in print

Also available in print

Also available in print

Ask the students these questions:

What operation can you use to solve the problem? [Multiplication] How can you use estimation to solve the problem? [Multiply 2 by 12 to get 24.] What other strategy can you use to solve this problem? [Make a table.]

Write an explanation for the solution and display it to the group.

### Repeating Master

Name \_\_\_\_\_ Repeating 14-5

#### Problem Solving: Writing to Explain

Explaining your problem-solving strategy can help you solve problems and avoid errors.

Jessy and Dean each measured the weight of their cats. Jessy's dog weighs 12 pounds 2 ounces. Dean's cat weighs 128 ounces. Dean said his cat weighed more. Is he correct?

<b>PLAN</b> I need to convert Jessy's measurement to ounces so I can compare it to Dean's cat weight.	Jessy's measurement, 12 pounds 2 ounces 12 pounds $\times$ 16 ounces = 192 ounces + 2 ounces = 194 ounces
<b>SOLVE</b> Compare measurements: Dean was incorrect; his cat weighs 128 ounces and Jessy's dog weighs 194 ounces.	Dean was incorrect: His cat weighs 128 ounces and Jessy's dog weighs 194 ounces.

Solve the problem below and explain how you found your answers.

- Paul measures the length of a hallway upstairs as 8 feet. His brother measures the length of the hallway downstairs as 96 inches. Which hallway is longer?  
**Sample answer: I can convert feet to inches. I know that 1 foot = 12 inches, so 8 feet  $\times$  12 inches = 96 inches. So, the hallways are the same length because each is 96 inches long.**

- Number Sense. Sam knows that the perimeter of a triangle on the right is 13 inches. Can she find the length of the missing side? Explain.  
**Sample answer: Yes, the perimeter of a triangle is equal to the sum of all 3 of its sides. She can add the two known sides and subtract the sum from the perimeter:  $5 + 3 + 8 = 16$  and  $13 - 8 = 5$ . The missing side has a length of 5 in.**

Also available in print

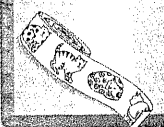
more than three quarters. She has \$8 in the bank. How many quarters and dimes does Gary have to be back?

How much more money would you save in a year if you received \$2 a day than if you received \$12 a week? Assume there is no leap year. Remember that there are 365 days in 52 weeks in a year.

Kathleen buys 12 packs of specialty stickers. Each packet contains 40 stickers. She decides to have a sticker party with her 9 friends. How many stickers does each friend get if Kathleen keeps one pack for herself?

Create a new problem. Ask your partner to explain how to solve it.

Understanding 2



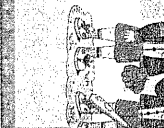
Write 8 numbers, four more than each whole with each whole less than 10.

Use each number to build a 9-digit and 14-digit. (8 is an even number, 28 is not.) Find out how many 340 inches. Who can build the tallest? (Hint: There are 12 inches in 1 foot. There are 36 inches in 3 feet.)

The sports club had a car wash and paid the city \$2000 for the water use. They washed 30 cars and charged \$800 for each car. After paying for the water, how much money did they have left?

Be excited! Design a new problem. Ask your partner to explain how to solve it.

Critical Thinking 2



**3-10 Partner Talk** Listen for explanations. For example, a student might say, "If we change every distance to inches, then we can compare the three measurements. To change 28 feet to inches, we should multiply by 12."

## Levelled Homework

### Practice Master

Name \_\_\_\_\_ Practice 14-5

#### Problem Solving: Writing to Explain

The shape to the right is a rectangle. How can you use the Sample answer? I can use the area and length to find the width:  $35 \div 7 = 5$  in.; then use the length and the width to find the perimeter:  $(2 \times 7) + (2 \times 5) = 24$ ;  $P = 24$  in.

David took a survey of 12 people to find out what their favorite animal is. Of those,  $\frac{1}{3}$  of the people said their favorite animal is a dog. **Sample answer: We need to find a third of the people who were surveyed so we divide 12 by 3 to get 4.**

Between 6 A.M. and 10 A.M. the temperature rose by 3°F. Between 10 A.M. and 2 P.M. the temperature rose by 6°F. Between 2 P.M. and 6 P.M. the temperature rose by 7°C. Since 6 A.M. is why or why not? **Sample answer: Yes, even though the final rise is 0°C, it's not changing the temperature; so  $5 + 6 = 11$ °F.**

How could you find out which weighs more, one ton of pillows or one ton of bowling balls?  
**Sample answer: They weigh the same because they both weigh 1 ton.**

Warren measured a rectangular window to find out how much plastic he would need to cover it. The window measured 5 ft 6 inches by 2 ft 9 inches. About how many square inches of plastic does Warren need to cover the window?  
A 1,800 square inches  
B 2,800 square inches  
C 2,400 square inches  
D 2,100 square inches

Also available in print

Name \_\_\_\_\_ Enrichment 14-5

#### A Pattern of Development

Professional photographers take many pictures of events. Then they select the best pictures to sell.

- Georgia used 6 rolls of film to photograph the school's sporting events. Each roll has 40 exposures. How many pictures did she take?  
 **$6 \times 40 = 240$  pictures**
- Georgia can develop 7 pictures an hour. If she works 40 hours a week, how many pictures can she develop?  
 **$7 \times 40 = 280$  pictures**
- The best pictures will go in the school's photo album. The album has 50 pages. Each page in the album holds 6 pictures. How many pictures will the album hold in all?  
 **$6 \times 30 = 180$  pictures**
- The school sells 80 albums and makes \$3 on each album.  
 **$80 \times \$3 = \$270$**

Solve. Use mental math.

- A female zoeo elephant eats about 2,000 pounds of pellets a year. If a zoeo has 10 female elephants, how many pounds of pellets does the zoeo need to produce each year?  
**20,000**
- There are 1,200 people in an auditorium. The auditorium has 60 rows of seats with 20 seats in each row. How many seats are there?  
**1,200 seats**
- There are 300 penguins in one colony. How many penguins are there in 7 colonies?  
**21,000**

Also available in print

Have students explain why they get a better measurement if they lay the meterstick on the floor and move the pencil, rather than trying to hold the meterstick steadily as they measure a stationary pencil.

Have students estimate the width of the pencil in millimeters and in centimeters.

**5** **Millimeter (mm)**

Choose a metric unit of length listed above. Find objects around your classroom that you would measure with that metric unit.

**Great Activity**

**6** **Centimeter (cm)**

Make your own game board like the one. Play again with your game board.

**Great Activity**

**Engage** Partner Talk Listen for comparisons. For example, a student might say, "I know that 10 millimeters is about the length of my fingernail. So a length that is between 2 mm and 9 mm is shorter than my fingernail."

## Leveled Homework

### Reaching Number

Name \_\_\_\_\_ Reaching 14-6

**Using Metric Units of Length**

Metric units are used to estimate and measure length.

- 1 cm = 10 mm
- 1 dm = 10 cm
- 1 m = 100 cm
- 1 km = 1,000 m



- Find the length to the nearest centimeter.
- Measured to the nearest centimeter, the segment is 6 cm long.
- Choose the most appropriate unit to measure each. Write mm, cm, dm, m, or km.
- length of a finger **cm**
  - length of a football **dm**
  - width of a big toe **mm**
  - length of the lunchroom **m**
  - distance between Paris and London **km**
- Estimate first. Then, find each length to the nearest centimeter.
- \_\_\_\_\_ **8 cm**
  - \_\_\_\_\_ **Estimates will vary.**
  - \_\_\_\_\_ **3 cm**
6. Number Sense The distance across a field is 20 m. Is the distance across the same field greater than or less than 20 mm?  
**Less than 20 km**

### Practice Master

Name \_\_\_\_\_ Practice 14-6

**Using Metric Units of Length**

Choose the most appropriate unit to measure each. Write mm, cm, dm, m, or km.

- width of a house **m**
- distance across Lake Erie **km**
- width of a humdrick **cm**
- thickness of a phone book **cm**

- Estimate first. Then, find each length to the nearest centimeter.
- Estimates will vary.**
- \_\_\_\_\_ **6 cm**
  - \_\_\_\_\_ **2 cm**
  - \_\_\_\_\_ **12 cm**
  - \_\_\_\_\_ **2 cm**
7. Number Sense Which would you be more likely to measure in centimeters, a fish tank or a swimming pool?  
**A fish tank**
8. Which is longer, a 12 cm pencil or a 1 cm pencil?  
**12 cm pencil**
9. Which is the most appropriate measure for the length of a skateboard?  
**A 5 mm**    **B 5 cm**    **C 5 m**    **D 5 km**
10. Writing to Explain All measured the length of her eraser. She wrote 5 cm on her paper without the unit. Which metric unit of measure should she include?  
**Sample answer: Centimeters because millimeters are too small and meters and kilometers are too large.**

Name \_\_\_\_\_ Enrichment 14-6

**My Aunt's New Doll**

Sarah is having a special doll made for her aunt. The doll is going to be 1 m tall, and Sarah wants it to look as much like her Aunt Jane as possible. Sarah's aunt is 2 m tall.

1. If a person's legs are about half their height, about how many centimeters long should the doll's legs be? Explain. Will they vary?  
**The doll's legs should be about 50 cm long.**

2. The doll's head is 18 cm long. The cheeks for the eyes are 1 mm, 2 cm, and 5 cm in diameter. Which eye choice should Sarah pick for the doll?  
**Eye choice measuring 2 cm in diameter**

3. Sarah's aunt has long, wavy, brown hair that reaches halfway down her back. It is about 50 cm long. About how long should the doll's hair be?  
**About 25 cm long**

4. After the doll was completed, Sarah received an invoice for the doll. The price of the doll's hair was based on a hair that measured 50 cm in diameter. Do you think this diameter was correct? Explain.  
**No: 50 cm is half of the height of the doll, which is too large a measure for a hat.**

5. Sarah gave the doll to Aunt Jane on her birthday. Sarah knows that Aunt Jane was born 3 years after Sarah's mother, and that Sarah's mother is 24 years older than Sarah. Is Sarah's Aunt Jane 9 years old? How old is Aunt Jane?  
**30 years old**

Also available in print

Also available in print

Also available in print

which objects will have greater capacity than others.

Help students measure the capacities of the containers. Write the capacity of each on a card and place the containers in order from least to greatest capacity.

Ask students to compare their predictions with the actual comparisons of the capacity.

### Repeating Meter

Name \_\_\_\_\_

Repeating  
14-7

**Metric Units of Capacity**  
Capacity is the amount of liquid that an object can hold. The metric system of measurement uses the units liter (L) and milliliter (mL). You would use liters to measure the amount of water in a water bottle or the amount of gasoline in a gas can. A milliliter is a very small unit of measurement. There are 5 mL of liquid in a teaspoon. You would use milliliters to measure small amounts of liquid, such as measuring how much medicine to give a baby.

1 L is the same as 1,000 mL.  
Choose the most appropriate unit to use to measure the capacity of each. Write L or mL.

1. thimble \_\_\_\_\_ mL
2. kitchen sink \_\_\_\_\_ L
3. coffee cup \_\_\_\_\_ mL
4. bucket of water for a horse \_\_\_\_\_ L

5. Number Sense. A container holds 5 L of fluid. Does it hold more than 5 mL of fluid?  
**The container holds more than 5 mL of fluid.**

6. A bottle is filled with saline solution for eyes. Is the bottle more likely to hold 15 mL of fluid?  
**The bottle is more likely to hold 15 mL of solution.**

Also available in print

## Levelled Homework

1. a bottle of eye drops  
2. a can of wall paint  
3. a kitchen sink  
4. a package with one serving of instant  
5. a small vase  
6. a large pill

Find containers around you. Indicate whether you would use milliliters or liters to measure the capacity of each container.

1,000 mL = 1 L

liters (L) \_\_\_\_\_  
milliliters (mL) \_\_\_\_\_

1. A small pen cap holds about 1 mL.  
2. A small pen cap holds about 1 mL.

3. Measure the capacity of each container.  
4. Measure the capacity of each container.

Report Back To check understanding, ask a student to repeat and complete this sentence:  
[Capacity]

### Practice Master

Name \_\_\_\_\_

Practice  
14-7

**Metric Units of Capacity**  
Choose the most appropriate unit to measure the capacity of each. Write L or mL.

1. water in a bathtub \_\_\_\_\_ mL
2. medicine in a bottle \_\_\_\_\_ mL
3. soup in a can \_\_\_\_\_ mL
4. Number Sense. Which will be less the number of liters of the liquid or milliliters of water in a sample answers for \_\_\_\_\_ Liters.
5. Name something you might measure in liters. \_\_\_\_\_

6. Name something you might measure in milliliters.  
**Amount of liquid in a glass of water**

7. A gallon of milk is about the same as 4 L of milk. About how many liters of milk are there in 10 gal?  
**40 L**

8. A small can of tomato juice contains 50 mL of juice. A large can of tomato juice contains 202 mL of juice. How much juice is there in the large and small cans combined?  
**258 mL**

9. Which capacity would you be most likely to measure in milliliters?  
A. gas in a car  
B. water in a bathtub  
C. tea in a cup  
D. detergent in a bottle

10. Writing to Explain. Would you be more likely to measure the capacity of my kitchen sink in liters or milliliters? Explain.  
**Liters. Sample answer: Because the capacity of my kitchen sink is large.**

Also available in print

1. Would one person put a liter of dressing on a salad?  
2. Would you measure a spoon of cough syrup in milliliters?  
3. Would a lake contain less than 100 liters of water?  
4. Can you drink 100 mL of water in one minute?  
5. Does an ice cube contain about 30 mL of water?  
6. Can you take a bath in 100 mL of water?

YES \_\_\_\_\_ NO \_\_\_\_\_

1. Make up one or more questions like these. Ask a partner to answer your questions.  
2. Answer Key \* \* \*

Name \_\_\_\_\_

Enrichment  
14-7

**Clever Scientists**  
Jane and Jim are in Mr. Martin's science class. They have to make a liquid that will be served at the school picnic. They have to use the same amount of liquid, but the only measuring devices they have are the following:  
5 mL container, 20 mL container, 500 mL container

Explain how they can use the three containers to measure the following ingredients:  
1. One real of a liter of raspberry juice  
2. Fill the 500 mL container 1 time, the 20 mL container 10 times, and the 5 mL container 10 times.  
3. 1 L of sparkling water  
4. Fill the 500 mL container 2 times.

5. 320 mL of apple juice  
6. Fill the 500 mL container, then fill the 20 mL container from the 500 mL container two times.  
7. The number of the 3 L container is 290 mL of ice. Fill the 20 mL container 14 times and fill the 5 mL container 2 times.

Answers will vary.

Also available in print

ranges down to best estimates.  
Place the objects on a pan balance, and use gram masses to find the approximate mass of the object. Compare the results with students' estimates.

Repeat this process with many objects.

### Repeating Master

Name \_\_\_\_\_ Repeating Master  
14-8

Units of Mass

The metric units for mass are grams (g) and kilograms (kg).

1 kg = 1,000 g

A cherry or a pen might have a mass of 1 g.

A kitten or a watermelon might have a mass of 1 kg.

Choose the most appropriate unit to measure the mass of each.

Write g or kg.

- |                 |    |                    |    |
|-----------------|----|--------------------|----|
| 1. lawn mower   | kg | 2. pumpkin         | kg |
| 3. child        | kg | 4. gold ring       | g  |
| 5. robin's egg  | g  | 6. cantaloupe      | kg |
| 7. cement block | kg | 8. spoon of thread | g  |

9. Number Sense Which is greater, 850 g or 1 kg?  
**1 kg is greater than 850 g.**

10. The mass of a certain window is 18 kg. What is the mass of 3 of those windows?  
**Five windows will have a mass of 90 kg.**

11. The mass of a horse is 380 kg. The mass of a second horse is 275 kg. How much larger is the mass of the second horse than that of the first horse?  
**The second horse has 95 kg more mass than the first horse.**

Also available in print

**1** Make up another puzzle about units of mass. Ask your partner to show the answers by stacking the tiles. Center Activity 7

**2** Ask your partner to show the answers by stacking the tiles. Center Activity 7

grams (g)  kilograms (kg)

## Levelled Homework

**EQD Report Back** To check understanding, ask a student to repeat and complete this sentence: *This amount of water has something about it is its [mass].*

### Practice Master

Name \_\_\_\_\_ Practice Master  
14-8

Units of Mass

Choose the most appropriate unit to measure the mass of each. Write g or kg.

- |                 |    |            |    |                 |    |
|-----------------|----|------------|----|-----------------|----|
| 1. banana       | g  | 2. tractor | kg | 3. coin         | g  |
| 4. bowling ball | kg | 5. fern    | g  | 6. encyclopedia | kg |

7. Number Sense Which is a greater number, the mass of a cat in grams or the mass of the same cat in kilograms?  
**The mass of the cat in grams**

8. The *Dromornis stirtoni* was once the largest living bird. It is now extinct. The ostrich is now the largest living bird. What is the difference in mass between the *Dromornis stirtoni* and an ostrich?

Bird	Mass
Ostrich	150 kg
Eurasian condor	9 kg
Eurasian eagle owl	4.2 kg
<i>Dromornis stirtoni</i>	351 kg

9. Which has a larger mass, an Andean condor or a Eurasian Andean condor?

10. Which object would be most likely to have a mass of 2 kg?  
A. A truck    B. An orange    C. A mosquito    **D. A rain boot.**

11. Writing to Explain Would you be more likely to find the mass of a pen in grams or in kilograms? Explain.  
**Grams. Sample answer: A pen is less than 1 kg, so using grams is more likely.**

Also available in print

**1** Could a paper clip have a mass of 100 grams? about 5 grams

**2** Could a small rodent animal have a mass of 10 kilograms? about 1 gram

**3** Could a key have a mass of one kilogram? YES

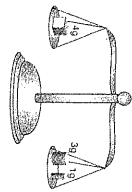
**4** Does a quarter have more mass than a nickel? NO

**5** Make up another puzzle about units of mass. Ask your partner to show the answers by stacking the tiles. Center Activity 7

Name \_\_\_\_\_ Endpaper  
14-8

Balance the Pans

Use gram measures—1 g, 2 g, and 9 g—to balance each pan. The left of the object that is on the inside and right columns with the mass you would add to both sides to balance the pans. The last one has been done for you.



Mass of Object on Left Pan	Mass Added to Left Pan	Mass Added to Right Pan
1. 1 g	0	1 g
2. 3 g	0	3 g
3. 5 g	1 g	3 g, 3 g
4. 8 g	1 g	9 g
5. 9 g	0	9 g
6. 10 g	1 g, 1 g	9 g, 3 g
7. 12 g	0	9 g, 3 g
8. 15 g	3 g	9 g, 9 g

Sample answers are given.

Also available in print

measure the height (in centimeters) of the tallest and shortest students.

- Ask the students to give you the difference between those two heights in millimeters.
- Based on where their notes are placed relative to the tallest and shortest students, ask each student to estimate their own height.
- Have the students check their estimates using the meterstick.

f	250 mm = 25 cm
g	100 mm = 10 cm
h	3,000 mm = 3 m
i	2,000 mm = 2 m
j	140 mm = 14 cm
k	5 kg = 5,000 g
l	400 mm = 40 cm
m	10 mm = 1 cm

n	10 dm = 1,000 mm
o	6,000 mm = 600 cm
p	3,000 mL = 3 L
q	2,000 mm = 2 m
r	4 m = 400 mm
s	5 kg = 5,000 g
t	3 m = 300 cm
u	2,000 g = 2 kg
v	10 mm = 1 cm
w	2,000 g = 2 kg
x	3 m = 300 cm
y	2,000 g = 2 kg
z	2,000 g = 2 kg

a	6 m = 3 × 2 m
b	15,000 mm = 15 m
c	8,000 mm = 8 m
d	30 dm = 3 m
e	100 mm = 10 cm
f	8,000 g = 8 kg
g	4,000 mL = 4 L
h	6 kg = 6,000 g
i	600 mm = 60 cm
j	600 mm = 60 cm
k	600 mm = 60 cm
l	600 mm = 60 cm
m	600 mm = 60 cm

n	140 mm = 14 cm
o	6,000 mm = 600 cm
p	10 cm = 1 m
q	1,200 mm = 120 cm
r	5 dm = 50 cm
s	3 m = 300 cm
t	800 mm = 80 cm
u	12,000 mm = 1,200 m
v	1,200 mm = 120 cm
w	1,200 mm = 120 cm
x	1,200 mm = 120 cm
y	1,200 mm = 120 cm
z	1,200 mm = 120 cm

### Levelled Homework

**Report Back** To check understanding, ask a student to repeat and complete this sentence: *There are 300 mm in 30 \_\_\_\_\_ [Centimeters]*

#### Retrieving Master

Name \_\_\_\_\_

#### Changing Metric Units

Here is a table of the conversion factors for metric units.

Metric Measures	
1 cm = 10 mm	1 dm = 10 cm
1 m = 100 cm	1 m = 1,000 mm
1 km = 1,000 m	1 kg = 1,000 g
1 kg = 1,000 g	

Remember: When converting from lesser to greater units you divide. When converting from greater to lesser units you multiply.

Which has more mass, a kilogram of lead or 1,200 grams of bricks?

1 kg = 1,000 g  
1,000 g of lead is less than 1,200 g of bricks.  
The bricks have more mass.

- Solve.
- Which is greater, 200 mm or 1 m? 1 m
  - Which amount is less, 250 mL or 250 L? 250 mL
  - If 4 apples have a mass of 1 kg, about how many grams is each apple? 250 g

Also available in print

#### Practice Master

Name \_\_\_\_\_

#### Changing Metric Units

For 1 through 12, compare. Write >, <, or = for each.

- 4 m  400 dm    2. 4 dm  40 cm
  - 10 L  1,000 mL    4. 2 kg  1,500 g
  - 15 cm  150 mm    6. 1 km  999 m
  - 4 L  4,500 mL    8. 500 g  5 kg
  - 6 km  6,000 m    10. 200 cm  3 m
  - 3,000 m  2 km    12. 100 mm  1 dm
13. Which measurement is NOT equal to 3 m?  
A. 30 dm    B. 300 cm    C. 3,000 mm     3,000 cm

14. Write in English if 5 potatoes together have a mass of 1 kilogram and 6 pears together have a mass of 1,200 grams, which has the greater mass, a potato or a pear? Explain.  
A potato: one potato has a mass of 200 g, and 1 pear has a mass of 150 g.  
200 g > 150 g

Also available in print

#### Volume and Capacity

Name \_\_\_\_\_

The capacity of a container is the amount it can hold. The volume of a container is the amount of space it takes up. The volume of the box on the right is 1 cm × 1 cm × 1 cm is 1 cubic cm, also called 1 cc. This is equal to 1 mL. Use the figure to help answer the questions below.



- What length are the sides of a cube-shaped box that contains 1 L?  
10 cm × 10 cm × 10 cm
- How many liters would be in a box that is 1 m × 1 m × 1 m?  
1,000 L
- How many liters of water would it take to fill a swimming pool that is 4 m wide by 9 m long and 2 m deep?  
36,000 L
- A rope is strung across the width of the pool in Exercises 3 beginning of this section to the end of the pool. How many liters of water fill the kiddie area?  
12,000 L
- A certain medicine is given in doses of 40 cc. How many doses can you make from 4 liters?  
100 doses

Also available in print



one hour.

Now have students use the clock to count the number of minutes in 2 hours.

*If I double the number of hours, what happens to the number of minutes? [They get doubled.] If there are 60 seconds in a minute, how would I find out how many seconds are in 5 minutes? [Multiply 60 by 5.] How would I find how many weeks are in 21 days? [Divide 21 by 7.]*

F	25 hours is how many more hours than one day?	B	120 minutes is how many hours?
G	77 hours is how many days?	T	13 weeks is about how many months?
H	200 minutes is how many hours?	U	360 minutes is how many hours?
I	52 weeks is how many years?	V	180 minutes is how many minutes?
J	120 seconds is how many minutes?	W	96 hours is how many days?
K	194 hours is how many days?	X	40 minutes is how many minutes?
L	180 minutes is how many hours?	Y	61 minutes is how many minutes less than 1 hour?
M	50 years is how many decades?	Z	20 minutes is how many minutes?

Test Two number cubes again. Play another game.

F	603 years is how many more years than 6 centuries?	S	200 years is how many more years than 2 centuries?
G	125 minutes is how many more minutes than 6 minutes?	T	101 hours is how many more hours than 2 weeks?
H	1,101 days is how many more days than 3 years?	U	1,089 days is how many more days than 3 years?
I	1,800 seconds is how many more seconds than 30 minutes?	V	241 minutes is how many more minutes than 4 hours?
J	240 minutes is how many more minutes than 4 hours?	W	79 hours is how many more hours than 2 days?
K	21 years is how many more years than 2 decades?	X	27 minutes is how many more minutes than 1 hour?
L	51 hours is how many more hours than 2 days?	Y	64 years is how many more years than 2 decades?
M	36 minutes is how many more minutes than 3 minutes?	Z	52 days is how many more days than 3 weeks?

Play another game. Begin with the next question on the list, or make up your own questions for this game with your questions.

**Report Back** To check understanding, ask a student to repeat and complete this sentence: *When comparing years with days, use the fact that one year is [365 days].*

**Leveled Homework**

**Repeating Master**

Name \_\_\_\_\_ Repeating 14-10

**Units of Time**

You can use the information in the table to compare different amounts of time. For example, which is longer, 3 years or 40 months?

Units of Time
1 minute = 60 seconds
1 day = 24 hours
1 week = 7 days
1 year = 52 weeks
1 year = 12 months
1 year = 365 days
1 decade = 10 years
1 century = 100 years

- Write <, >, or = for each .
- 1 year  360 days
  - 25 months  2 years
  - 20 decades  2 centuries
  - 720 days  2 years
  - 8 decades  1 century
  - 72 hours  3 days
  - 240 minutes  3 hours
  - 3 years  120 months
  - Number Sense How many hours are in 2 days? **48 hours**
  - A score is 20 years. How many years is 5 score? **100 years**
  - Dave's grandfather lived for 7 years, 8 months. Chris's grandfather lived for 35 months. Whose grandfather lived longer? **Chris's**
  - Tree A lived for 6 decades and 5 years. Tree B lived for 50 years. Which tree lived longer? **Tree A**

Also available in print

**Practice Master**

Name \_\_\_\_\_ Practice 14-10

**Units of Time**

- Write >, <, or = for each .
- 48 hours  4 days
  - 1 year  12 months
  - 60 minutes  2 hours
  - 17 days  2 weeks
  - 5 months  40 weeks
  - 1 millennium  10 centuries
  - 6 decades  1 century
  - 5 decades  48 years
  - Cheryl's grandparents have been married 60 years. They been married? **60 years**
  - Tom was in elementary school from 1997 to 2002. How much time was that in years? **5 years**
  - The Declaration of Independence was signed on July 4, 1776. The United States celebrated the bicentennial on July 4, 1976. How much time was that in years? **200 years**
  - 200 years  20 decades
  - 49 days = 
    - 5 weeks
    - 8 weeks
    - 7 weeks
    - 8 weeks

**Sample answer: They are equal. There are 60 sec in 1 min. So, 3 min equals 180 sec.**

Also available in print

**Repeating Master**

Name \_\_\_\_\_ Repeating 14-10

**Time to Talk**

Match the statement on the left to the best response on the right.

<p>We've gone 72 hours without electricity.</p> <p>The radio says the gas is 54 cents.</p> <p>The radio says the gas is 54 cents.</p> <p>The radio says the gas is 54 cents.</p> <p>The radio says the gas is 54 cents.</p>	<p>Wow, there are only 4 days to a long time on that!</p> <p>Wow, there are only 4 days to a long time on that!</p> <p>Wow, there are only 4 days to a long time on that!</p> <p>Wow, there are only 4 days to a long time on that!</p>
<p>They said the movie was 80 minutes long.</p> <p>They said the movie was 80 minutes long.</p> <p>They said the movie was 80 minutes long.</p> <p>They said the movie was 80 minutes long.</p>	<p>Wow, there are only 4 days to a long time on that!</p> <p>Wow, there are only 4 days to a long time on that!</p> <p>Wow, there are only 4 days to a long time on that!</p> <p>Wow, there are only 4 days to a long time on that!</p>
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<p>They said the movie was 80 minutes long.</p> <p>They said the movie was 80 minutes long.</p> <p>They said the movie was 80 minutes long.</p> <p>They said the movie was 80 minutes long.</p>	<p>Wow, there are only 4 days to a long time on that!</p> <p>Wow, there are only 4 days to a long time on that!</p> <p>Wow, there are only 4 days to a long time on that!</p> <p>Wow, there are only 4 days to a long time on that!</p>

Also available in print

such as the following:

What facts do I know?

What is the previous step?

Students can partner with other students in pairs to share their ideas as they work backward.

**Partner Talk** Listen for language that describes how the team will work backward to solve the problem. For example, a student might say, "The plant grew taller by adding to its height, so we have to subtract to find its original height."

**Repeating Master**

Repeating 14-11

**Problem Solving: Work Backward**

Morning Routine Brenda takes 30 minutes to get dressed for school. She eats breakfast for 20 minutes more, then walks to school. It takes Brenda 15 minutes to walk to school. Brenda starts get out of bed in the morning?

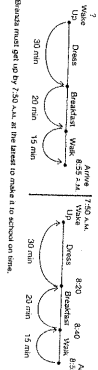
**Read and Understand**

Step 1: What do you know? Brenda takes 30 more to get ready, 20 min for breakfast, and 15 min to walk to school. She must get up by 8:30 a.m.

Step 2: What are you trying to find? What time is she must finish should get up?

**Plan and Solve**

Strategy: Work backward. Work backward from the end, doing the opposite of each step.



**Look Back and Check**

Step 4: Is your work correct? Yes. If I finish the time backward I end at 8:30 a.m.

1. When Christopher Columbus was 41 years old he sailed across the Atlantic Ocean for the first time. He went on his 2 years after the first expedition ended, in 1506. What year was Columbus born? **Christopher Columbus was born in 1451.**

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**Practice Master**

Practice 14-11

**Problem Solving: Work Backward**

Solve by working backward. Write the answer in a complete sentence.

- There were 21 students in Travis's fourth-grade class at the end of the school year. During the year four new students joined his class, and 2 moved away. One student was transferred to class at the lower-grade teacher. How many students were in Travis's fourth-grade class at the beginning of the school year? **There were 20 students in Travis's fourth-grade class at the beginning of the school year.**
- Sir John Franklin was an explorer who traveled in Canada and the United States. He was 33 years old when he began his first expedition in 1813. He was 65 when he began his second expedition in 1845. How old was he when he was 65? **Sir John Franklin was born in 1786.**
- Tessie has a volleyball game at 6:45 p.m. She needs to be there 15 minutes early to warm up for the game. How long should she have her lunch? **Tessie should leave her house at 5:50 p.m.**
- Frank bought lunch for \$5.60 at a diner. He spent \$2.00 to ride the bus to the mall and back, and spent \$5.50 while he had his lunch. His friend Bill paid him back \$5.00 that he had in his pocket. How much did he have when he left home that morning? **Frank had \$19.60 when he left home.**

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1. Anna bought 2 of her CDs with \$20 each, 1 of her CDs with \$10 each, and 2 of her CDs with \$5 each. She now has 29 CDs left. How many CDs did Anna have before she bought these new CDs?

2. Brenda walked from the house to the Sports Complex. Then she walked  $\frac{1}{2}$  mile back to the Sports Complex, to Brenda's house. Then she walked  $\frac{1}{4}$  mile back home and walked  $\frac{1}{2}$  of a mile home. If she walked a total of 2 miles, how far did she walk from her house to the Sports Complex? Create another problem that can be solved by working backward. Repeat steps 1–4 for your problem.

3. A student bought a gift for her mother's birthday. She spent \$21.00 for the gift and \$3.00 for her mother's gift and \$20.00 for her father's gift. She had \$10.00 left for herself. She had \$20.00 left at the end of the year. How much money did she have at the beginning of the year?

4. A student bought a gift for her mother's birthday. She spent \$21.00 for the gift and \$3.00 for her mother's gift and \$20.00 for her father's gift. She had \$10.00 left for herself. She had \$20.00 left at the end of the year. How much money did she have at the beginning of the year?

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2. Brenda walked from the house to the Sports Complex. Then she walked  $\frac{1}{2}$  mile back to the Sports Complex, to Brenda's house. Then she walked  $\frac{1}{4}$  mile back home and walked  $\frac{1}{2}$  of a mile home. If she walked a total of 2 miles, how far did she walk from her house to the Sports Complex? Create another problem that can be solved by working backward. Repeat steps 1–4 for your problem.

**Levelled Homework**

**It's About Time**

Study each situation. Draw the hands on both clocks to show your answer. Write the time on the line.

Answers will vary.

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