Write each measurement in millimeters (mm). Round the measurement to the nearest centimeter (cm).

(4) $\qquad$ mm rounds to $\ldots \quad \mathrm{cm}$

5 $\qquad$ mm rounds to $\qquad$ cm $\qquad$ mm rounds to $\qquad$ cm

7 $\qquad$ mm rounds to $\qquad$ cm

8 $\qquad$ mm rounds to $\qquad$ cm

Write a number sentence to answer each question.
(9) How many meters are equal to 7 kilometers?
$\qquad$
(10) How many centimeters are equal to 4 meters?
$\qquad$
(11) How many millimeters are equal to 15 centimeters?
$\qquad$
(12) How many millimeters are equal to 12 meters?
$\qquad$
$(13$ How many centimeters are equal to 2 kilometers?

Solve.
(14) Chester has a ribbon that is 2 meters long. He wants to cut it into 5 equal pieces. How many centimeters long will each piece be?
$\qquad$
$\qquad$

Add or subtract.

1) 7,295
$+2,941$
(2) 84,366
$-20,472$
(3) 541,000
$\begin{array}{r}-181,276 \\ \hline\end{array}$

Divide with remainders.
(4) $4 \longdiv { 3 1 }$
(5) $6 \longdiv { 4 4 }$
(6) $9 \longdiv { 3 2 }$

Evaluate.
(7) $t=5$

$$
(9+t) \div 2
$$

(8) $k=25$
$k \div(10 \div 2)$
$\qquad$
(10) $g=2$
$(g \div 2) \times 8$
(11) $r=5$
$(15-r) \times(9-3)$
(12) $x=1$
$(2 \times 8) \div(4 \div x)$
(9) $p=3$
$(6+p) \times(15-11)$
$\qquad$
(13) Stretch Your Thinking Kyle says the number is greater when an object is measured in centimeters than in millimeters. Is Kyle correct? Explain.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

## Complete.

(1) How many milliliters are equal to 3 L ?
$\qquad$
(2) How many milliliters are equal to 35 L ?
(3) How many grams are in 40 kg ?
$\qquad$
(4) How many grams are in $5,000 \mathrm{~kg}$ ?

Solve.
Show your work.
(5) Every morning for breakfast, Mika drinks 20 cL of orange juice. How many milliliters of orange juice does she drink each day?
(6) Angie's puppy weighed 3 kg when she first got it. Two years later, it weighed 9 kg . How many grams did the puppy gain?

7 Write and solve two word problems: one that involves converting units of liquid volume and one that involves converting units of mass.

Solve. Use the Place Value Sections Method and the Expanded Notation Method for division.
(1) A coin candy machine contains 5,696 pieces of candy. With each quarter, a customer receives 8 pieces of candy. How many customers can use the candy machine before it must be refilled?
$8 \longdiv { 5 , 6 9 6 }$

8


Write an equation to solve the problem. Draw a model if you need to.

2 At the library one day, 1,742 books were checked out in the morning. Some more books were checked out in the afternoon. Altogether that day, 2,563 books were checked out. How many books were checked out of the library in the afternoon?
$\qquad$
$\qquad$

Write a number sentence to answer the question.
(3) How many centimeters are equal to 6 meters?
4) Stretch Your Thinking Complete the double number line.


## Convert each measurement.

(1) $45 \mathrm{~min}=$ $\qquad$ sec
(2) $2 \mathrm{hr}=$ $\qquad$ min
(3) 3 years $=$ $\qquad$ weeks
(4) 1 day $=$ $\qquad$ min
(5) 6 weeks $=$ $\qquad$ days
(6) 18 days $=$ $\qquad$ hours

Complete the line plot. Answer the questions using the line plot.
(7) Melissa asked her classmates how much time they spend each day exercising. The table shows the data Melissa collected. Complete the line plot using the data from the table.


Time Spent Exercising (in hours)

| Time | Number |
| :---: | :---: |
| 0 hour | 0 |
| $\frac{1}{4}$ hour | 4 |
| $\frac{1}{2}$ hour | 3 |
| $\frac{3}{4}$ hour | 6 |
| 1 hour | 2 |

a. How many more students exercised for $\frac{3}{4}$ hour than $\frac{1}{4}$ hour? $\qquad$
b. How many students did Melissa ask about how much time they exercise? $\qquad$

## Solve.

8 Donald takes the bus to work. The bus ride is 37 minutes long. Donald gets on the bus at 7:22. At what time does Donald get off the bus?
(9) Kinesha started her homework at 6:15. She finished at 7:32. How long did it take Kinesha to do her homework?

Solve. Use the Place Value Sections and the Expanded Notation Methods for division.
1

$5 \longdiv { 1 , 8 9 5 }$

Solve each equation.
(2) $180 \div m=3$
(3) $r \times 9=108$
$r=$ $\qquad$
(4) $350 \div 7=p$
$p=$ $\qquad$

## Complete.

(5) How many grams are equal to 8 kilograms?
(6) How many milliliters are equal to 14 centiliters?

7 How many milligrams are equal to 200 grams?

Solve.
Show your work.
8 A full box of paperclips weighs 150 grams. People use some paperclips from the box, and it now weighs 138 grams. How many milligrams lighter is the box?
(9) Stretch Your Thinking Cassie and her family go to a restaurant for dinner. They leave their house at 5:25 and arrive at the restaurant at 5:53. They leave the restaurant at 7:09. How long does it take for the family to arrive at the restaurant? How many minutes pass from the time they leave their house to the time they leave the restaurant?

Complete the tables.

(1) | Yards | Inches |
| :---: | :---: |
| 3 |  |
| 6 |  |
| 9 |  |
| 12 |  |

2

| Miles | Feet |
| :---: | :---: |
| 2 |  |
| 3 |  |
| 4 |  |
| 5 |  |

Solve.
(3) $4 \mathrm{ft}=$ $\qquad$ in.
(4) 3 miles $=$ $\qquad$ yards
(5) $11 \mathrm{yd}=$ $\qquad$ ft
(6) $26 \mathrm{ft}=$ $\qquad$ in.

Write the measurement of the line segment to the nearest $\frac{1}{8}$ inch.
(7)


Solve.
8 Explain what is wrong with the ruler shown below.


## Divide.

(1) $6 \longdiv { 5 8 2 }$
(2) $5 \longdiv { 4 , 9 6 1 }$
(3) $7 \longdiv { 6 , 3 3 4 }$

Solve the comparison problem.
(4) Michael made $\$ 265$ taking care of his neighbors' pets this summer. This was 5 times the amount he made last summer. How much money did Michael make taking care of pets last summer?

## Convert each measurement.

(5) 9 days $=$ $\qquad$ hrs
(6) $14 \mathrm{~min}=$ $\qquad$ sec
(7) $6 \mathrm{hrs}=$ $\qquad$ min
(8) 4 weeks = $\qquad$ days
(9) Stretch Your Thinking Zack says that the line segment is $3 \frac{7}{10}$ inches long. Explain Zack's error. What is the correct measurement of the line segment?

$\qquad$
$\qquad$
$\qquad$

Solve.
(1) A female rabbit gave birth to 6 babies. Each baby weighed 4 ounces. How many ounces did the babies weigh in all?
(2) One watermelon weighs 128 ounces. Another weighs 112 ounces. Which watermelon is heavier? By how many ounces?
(3) A box of cereal weighs 21 ounces. Does it weigh more or less than 1 pound? How much more or less?
(4) Mark had 3 quarts of milk. How many pints of milk did Mark have?
(5) Trevon's mom bought 3 gallons of fruit juice at the store. How many fluid ounces of fruit juice did Trevon's mom buy?
$\qquad$
(6) Marinda made a drink that contained 2 pints of apple juice, 3 pints of grape juice, and 2 pints of cranberry juice. How many pints of juice did Marinda make?

Solve using any method.
(1) $7 \longdiv { 6 4 3 }$
(2) $2 \longdiv { 5 , 6 9 8 }$
(3) $4 \longdiv { 8 , 9 1 3 }$

Write and solve an equation to solve each problem.
Show your work. Draw comparison bars when needed.
(4) Chris swam 94 laps at a pool for a fundraiser. This is twice the number of laps he expected he would be able to swim. How many laps was Chris expecting to swim?
(5) Jackie drank 60 ounces of water today, which was 12 more ounces than she drank yesterday. How much water did Jackie drink yesterday?

Complete the tables.
6

| Feet | Inches |
| :---: | :---: |
| 2 |  |
| 4 |  |
| 5 |  |
| 8 |  |

(7) | Miles | Yards |
| :---: | :---: |
| 3 |  |
| 4 |  |
| 8 |  |
| 10 |  |

8 Stretch Your Thinking Kali needs to pour 2 gallons of water into his fish tank. All he has is a measuring cup. How many cups of water should he put in the tank? Explain.

Find the area and perimeter for rectangles with the lengths and widths shown.
(1) $I=5$ units
(2) $I=8$ units
(3) $I=7$ units
(4) $I=4$ units
$w=6$ units
$w=4$ units
$w=5$ units
$w=7$ units
$A=$
$A=$ $\qquad$ $A=$ $\qquad$
$\qquad$
$P=$ $\qquad$ $P=$ $\qquad$
$P=$ $\qquad$
$P=$ $\qquad$

5 Challenge Using only whole numbers, make as many different rectangles as you can that have either the same area or the same perimeter as the rectangles in Exercises 1-4.

Solve each word problem. Show the formula you used
Show your work. to find the answer.
(6) Enzo is building a dog run that measures 10 feet by 9 feet. How many feet of fencing does he need to fence in the area?
(7) A sheet of construction paper is 9 inches long and 11 inches wide. How many 1 -inch squares of paper can Dwayne cut out of one sheet of paper?
$\qquad$
8 Mieko has a rug that is 6 feet long and 8 feet wide. Her room measures 9 feet each way. Will the rug fit in her room? How do you know?
$\qquad$
$\qquad$
$\qquad$

Add or subtract.
(1) 7,382
$-2,990$
(2) 47,291
$-\quad 3,845$
(3) 573,019
$\begin{array}{r}+32,485 \\ \hline\end{array}$

Use an equation to solve.
(4) A store pays $\$ 715$ for a shipment of 38 board games to Show your work. stock their shelves. Each board games sells for \$24. How much profit does the store make on the sales of the board games?

Solve.
(5) A preschool uses 4 gallons of milk a day. How many fluid ounces of milk does the preschool use in a day?

6 Stretch Your Thinking A bathroom has a length of 10 feet and a width of 9 feet. Kade wants to put down tiles on the floor that are each 1 square foot. Then he will put a baseboard along the edges where the walls meet the floor. How many tiles does Kade need? How much baseboard does he need? Show your work.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

## Solve.

(1) Barbara has a rectangular shaped mouse pad. The longest side of the mouse pad is 8 inches and the shortest side is 3 inches. What is the perimeter and area of the mouse pad?
(2) Yeasmin has a cup with 27 milliliters of milk in it. She pours another 34 milliliters of milk into the cup. She then drinks 14 milliliters of the milk. How much milk is left in the cup?
(3) John's dog weighed 7 pounds when he got him. The dog's weight tripled each year for two years. How many ounces does John's dog now weigh?
(4) The area of a rectangular shaped living room was 240 sq ft . The longest side of the room was 20 ft . What is the length of the small side of the room?
$\qquad$
(5) A grapefruit has a mass of 100 grams. A watermelon has a mass of 4 times the mass of the grapefruit. What is the mass of the watermelon, in centigrams?
$\qquad$
6 Hannah ran 200 yards during recess. Juanita ran 340 yards during recess. In feet, how much further did Juanita run than Hannah?

7 The perimeter of the rectangular shaped building is 960 ft . The shortest side of the building is 150 ft . What is the length of one of the longest sides of the building?

Solve by any method. Then check your answer by rounding and estimating.
(1) $6 \longdiv { 4 9 }$
(2) $4 \longdiv { 5 0 2 }$
(3) $6 \longdiv { 3 , 7 8 1 }$

Use an equation to solve.
4 Sydney bakes mini muffins for a bake sale. She bakes
4 pans that hold 12 muffins each and 3 pans that hold 18 muffins each. How many muffins does Sydney bake?

Find the area and perimeter for rectangles with the lengths and widths shown.
(5) $I=8$ units
(6) $I=2$ units
$w=7$ units
$w=14$ units
$A=$ $\qquad$
(7) $I=12$ units
$w=3$ units
$A=$ $\qquad$
$A=$
$P=$ $\qquad$
$P=$ $\qquad$

8 Stretch Your Thinking Ms. Carpse writes the following problem on the board. A 20-foot length of ribbon is cut into 4 equal pieces. How many inches long is each piece of ribbon? Ashe says you should first divide 20 feet by 4, then convert to inches. Wesley says you should first convert 20 feet to inches, then divide by 4 . Explain how both students are correct.
$\qquad$
$\qquad$
$\qquad$

## Solve.

(1) Yoni has a 5 gallon fish tank. He needs to change the water in the fish tank. How many cups of water will Yonne need to replace all the water in the fish tank?
(2) Barry is building a fence around his backyard. The backyard is in the shape of a rectangle and the longest side of the yard is 20 meters. The fence will have a perimeter of 60 meters. How many meters long is the short side of the backyard?
(3) Yesi's dog weighed 5 pounds when she got him. He now weighs 45 pounds. How much weight did Yesi's dog gain, in ounces?
(4) Fiona's family is replacing the carpet in their living room. The living room is in the shape of a square. The length of one wall is 16 feet. How many square feet of carpet does Fiona's family need to buy to replace their old carpet?

5 Trevor drew the two rectangles below. He wanted to know the difference between the areas of the two rectangles. What is the difference between the two areas?


Solve. Then explain the meaning of the remainder.
(1) There are 43 students at a musical performance. Each row in the auditorium has 8 seats. If the students fill seats row by row from front to back, how many people are in the last row?
Write whether each number is prime or composite.
(2) 49
$\qquad$

Solve.
(3) 31
$\qquad$

5 The perimeter of a postage stamp is 90 millimeters. The longer side of the stamp is 25 millimeters. What is the length of the shorter side?
$\qquad$
$\qquad$
(6) Stretch Your Thinking The directions for lemonade say to put 2 cups of the liquid concentrate into 1 gallon of water. If Olivia only wants to make 1 pint of lemonade, how many fluid ounces of concentrate should she use? Explain.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

