Body Measures

> **Family Note** Today your child measured to the nearest half inch. Help your child measure an adult at home. Use a tape measure if available, or mark lengths on a piece of string and then measure the string with a ruler.
>
> *Please return this Home Link to school tomorrow.*

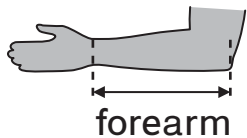Measure an adult at home to the nearest $\frac{1}{2}$ inch. Fill in the information below:

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Name of adult: _____   Around neck: about _____ inches
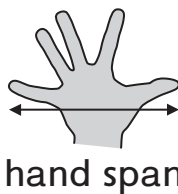
Height: about _____ inches   Around wrist: about _____ inches

Length of shoe: about _____ inches   Distance from waist to floor:

                                         about _____ inches

Forearm: about _____ inches	Hand span: about _____ inches	Arm span: about _____ inches
forearm	hand span	←arm span→

Practice

Fill in the unit box. Solve. Show your work in the space below.

Unit

① _____ = 293 + 145

② 326 − 158 = _____

Describing Data

Family Note Today your child represented shoe-length measures on a line plot. Help your child answer questions about the line plot below.
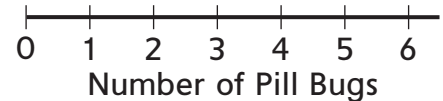
Please return this Home Link to school tomorrow.

Children in the Science Club collected pill bugs. The tally chart shows how many they collected. Use the data from the tally chart to complete the line plot.

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Number of Pill Bugs	Number of Children
0	
1	
2	///
3	⊬⊬
4	
5	//
6	//

Number of Children

```
├──┼──┼──┼──┼──┼──┤
0   1   2   3   4   5   6
    Number of Pill Bugs
```

Use the information in the line plot to answer the questions.

① What is the greatest (maximum) number of pill bugs found? _____

② What is the least (minimum) number of pill bugs found? _____

③ How many pill bugs were collected all together? _____

Practice

Think how the first fact can help you solve the second. Draw an array to show your strategy. Then solve.

④ $2 \times 7 =$ _____

   $3 \times 7 =$ _____

⑤ $5 \times 6 =$ _____

   $4 \times 6 =$ _____

Measuring Distances Around Objects

Family Note Today your child measured the distance around his or her head and wrist, as well as around different objects in the classroom. Finding the distance around objects helps children understand perimeter, which is formally introduced in Lesson 4-6. It is also good practice for measuring to the nearest $\frac{1}{2}$ inch.

Please return this Home Link to school tomorrow.

Talk to someone at home about finding the distances around objects.

(1) What tools can be used to measure the distance around an object?

_____

(2) Choose two objects in your home, such as a small picture frame and a book. Choose a measuring tool and use it to measure the distance around each object to the nearest $\frac{1}{2}$ inch.

Object: _____   Measurement: about _____ inches

Object: _____   Measurement: about _____ inches

What measuring tool did you use? _____

Practice

Think of how the first fact can help you solve the second. Then solve both. You may draw arrays to help.

(3) $5 \times 7 =$ _____

$6 \times 7 =$ _____

(4) $10 \times 6 =$ _____

$9 \times 6 =$ _____

(5) $5 \times 8 =$ _____

$6 \times 8 =$ _____

(6) $10 \times 7 =$ _____

$9 \times 7 =$ _____

Polygons

Family Note Today your child learned the names of different polygons. A polygon is a 2-dimensional shape with only straight sides that meet end to end to make one closed path. The sides may not cross one another. Polygons are named by the number of sides they have. Polygons are all around us. For example, a stop sign is an octagon, an 8-sided polygon, and this Home Link page is a rectangle, a 4-sided polygon with 4 right angles (square corners).

Please return this Home Link to school tomorrow.

① Cross out the shapes that are not polygons.

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How do you know which shapes are not polygons?

_____

_____

② Cut out pictures of shapes from newspapers and magazines to match each of the descriptions below. Tape or glue your pictures on the front or back of this page.

equal-length sides	parallel sides
at least one right angle	quadrilateral

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Special Quadrilaterals

Family Note Today your child learned about six different categories of quadrilaterals, which are polygons that have four sides: squares, rectangles, rhombuses, parallelograms, trapezoids, and kites. Although these categories have specific definitions, a particular shape may fall into more than one category.

Please return this Home Link to school tomorrow.
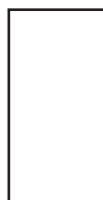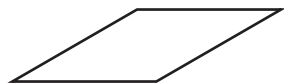
(1) Name the two special quadrilaterals below.

_____   _____

How are these two shapes alike? _____

_____

How are they different? _____

_____

(2) Name the two special quadrilaterals below.

_____   _____

How are these two shapes alike? _____

_____

How are they different?

_____

_____

Perimeter

Family Note Today your child found the perimeters of several polygons. Perimeter is the distance around a 2-dimensional shape. Finding perimeters gives your child practice measuring to the nearest $\frac{1}{2}$ inch and the nearest whole centimeter.

Please return this Home Link to school tomorrow.

If you do not have a ruler at home, cut out and use the 6-inch ruler on the next page. Measure the sides of each polygon to the nearest $\frac{1}{2}$ inch. Use the side lengths to find the perimeter of each polygon.
Write a number sentence to show how you found the perimeter.

1
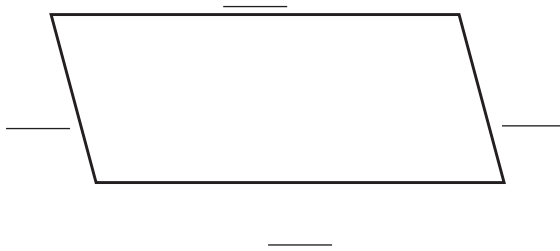
Number sentence: _____

Perimeter: about ____ inches

2
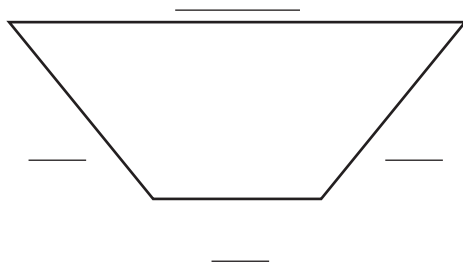
Number sentence: _____
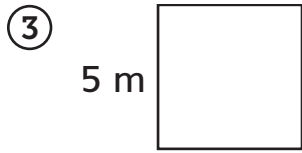
Perimeter: about _____ inches

Perimeter (continued)

Find the perimeters of the square and the rectangle below.

(3)

5 m ☐

Number sentence: _____
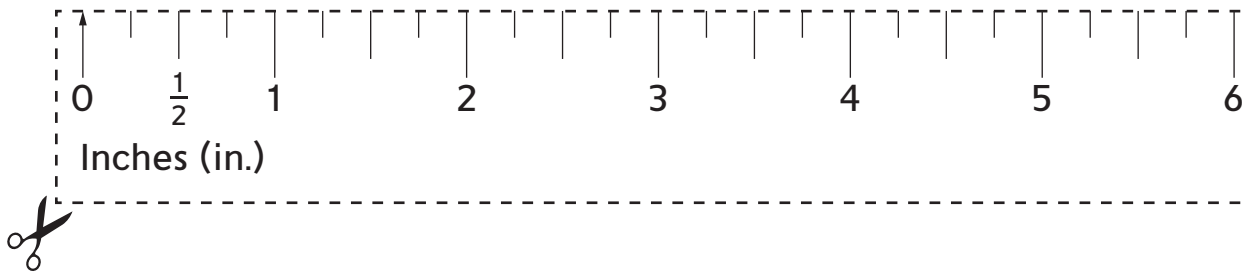
Perimeter: _____ meters (m)

(4)

5 cm ▭

12 cm
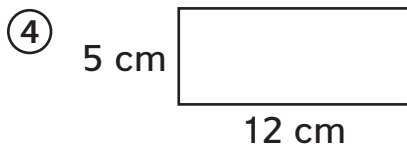
Number sentence: _____

Perimeter: _____ centimeters (cm)

(5) Draw a quadrilateral below. Find the perimeter to the nearest $\frac{1}{2}$ inch.

```
0    1/2   1        2        3        4        5        6
```
Inches (in.)

Perimeter and Area

Family Note Today your child compared measuring perimeter to measuring area using 1-foot squares. *Perimeter* is the distance around a shape. It can be measured in units of length, such as centimeters, inches, feet, and so on. *Area* is the measure of surface space inside the boundary of a shape. It can be measured in square units, such as square centimeters, square inches, square feet, and so on. To measure perimeter, children used the edges of 1-foot squares as their units. To measure area, they used the area of 1-foot squares as their units.

Please return this Home Link to school tomorrow.

Trace the boundary of the rectangle with a crayon to show where you measure the perimeter.

With a different colored crayon, shade the surface inside the rectangle to show where you measure area.

① Key: ☐ = 1 square foot

Dale said the perimeter of this rectangle is 16 feet and the area is 12 square feet. Do you agree? Explain.
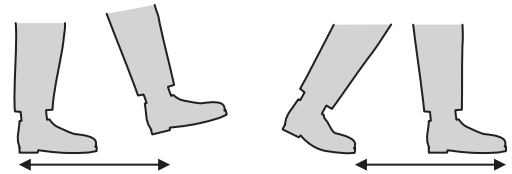
_____

_____

_____

Your pace is the length of one of your steps.

② Find the perimeter, in paces, of your bedroom. Walk along each side and count the number of paces.

The perimeter of my bedroom is about _____ paces.

③ Which room in your home has the largest perimeter? Use your estimating skills to help you decide.

The _____ has the largest perimeter.

Its perimeter is about _____ paces.

Areas of Rectangles

Family Note Today your child found areas of rectangles using composite units. Composite units are made up of two or more square units. Using composite units to find area helps children see a rectangle as having a row-by-column structure, and it helps them measure area more efficiently.
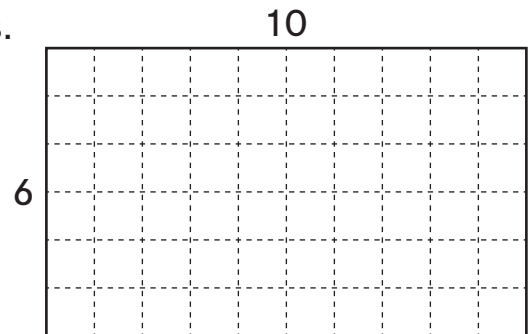
Please return this Home Link to school tomorrow.

① Sarah tiled her floor with square tiles. This is a drawing of her floor:

Shade a composite unit made of 10 squares. Use the composite unit to figure out the number of tiles Sarah needs.
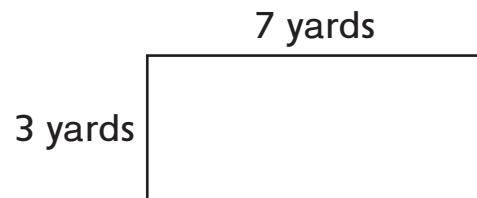
Sarah needs _____ tiles.

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6

② Alejandro painted a wall that is 3 yards tall and 7 yards long. This is a drawing of the wall:

Partition the rectangle to show 3 rows with 7 squares in each row. Shade a composite unit made of 3 squares. Then figure out the area of the wall.

7 yards

3 yards

How many square yards did Alejandro paint? _____ square yards

③ Explain how you found the area of the wall in Problem 2.

_____

_____

_____

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Arrays, Side Lengths, and Area

Family Note Today your child learned that side lengths of rectangles correspond to the number of square units in the rectangles' rows and columns. Just as rows and columns in arrays can be multiplied to find total numbers of objects, side lengths can be multiplied to find areas of rectangles.

Please return this Home Link to school tomorrow.

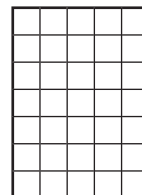Make a dot inside each small square in one row. Then fill in the blanks.

(1) Number of rows: _____

Number of squares in a row: _____

Number sentence: _____ × _____ = _____

Area: _____ square units

(2) Number of rows: _____

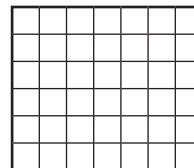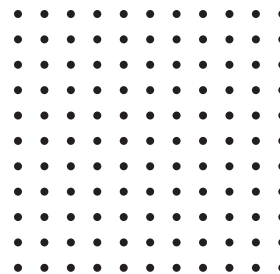Number of squares in a row: _____

Number sentence: _____ × _____ = _____

Area: _____ square units

Mark the dots to show each array. Then fill in the blanks.

(3) Make a 4-by-8 array.
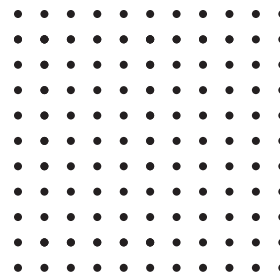
Number sentence: _____ × _____ = _____

(4) Make a 9-by-5 array.
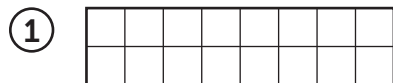
Number sentence: _____ × _____ = _____

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Area and Perimeter

> **Family Note** Today your child learned how to play *The Area and Perimeter Game* to practice finding the areas and the perimeters of rectangles.
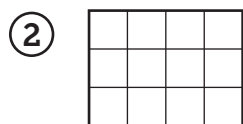>
> ***Please return this Home Link to school tomorrow.***

Find the area and the perimeter of each rectangle.

(1) This is a 2-by-8 rectangle.

Area: _____ square units

Perimeter: _____ units
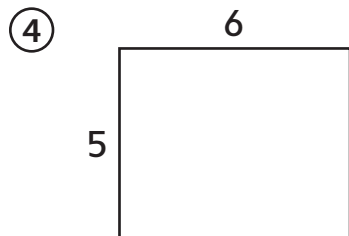
(2) This is a 3-by-4 rectangle.

Area: _____ square units

Perimeter: _____ units

(3) What strategies did you use to solve Problem 2?

_____

_____

Try This

(4)

6

5

This is a 5-by-6 rectangle.

Area: _____ square units

Perimeter: _____ units

What strategies did you use? _____

_____

_____

Working with Perimeter and Area

Family Note Today your child solved problems involving perimeter, the distance around a shape, and area, the amount of surface inside a shape. Ask your child to explain how area and perimeter are used in solving the two problems below.

Please return this Home Link to school tomorrow.

1. All of the sides of the two figures below are 2 feet long. Find the perimeter of each figure. Remember to write the units with your answers.

Perimeter = _____
(unit)
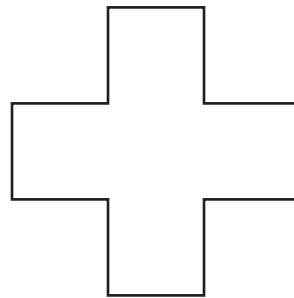
Perimeter = _____
(unit)

2. Sue wants to paint the longest wall in her bedroom pink. She measured the wall and found that it is 10 feet long and 8 feet tall. When she went to the hardware store to buy paint, Sue learned that 1 quart of paint can cover 50 square feet.

   Sue should buy _____ of paint.
   (unit)

   Show how you figured out how much paint Sue will need.

Finding the Area of Rectilinear Figures

Family Note Today your child learned how to find the area of a rectilinear figure (a polygon whose sides all meet to make right angles) by decomposing, or separating, it into smaller rectangles. Help your child follow the steps to find the area of the rectilinear figure below.

Please return this Home Link to school tomorrow.

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180-181

① Partition the shape into 2 or 3 rectangles.

② Find the area of each rectangle.

③ Add the areas of the rectangles to find the area of the whole shape.
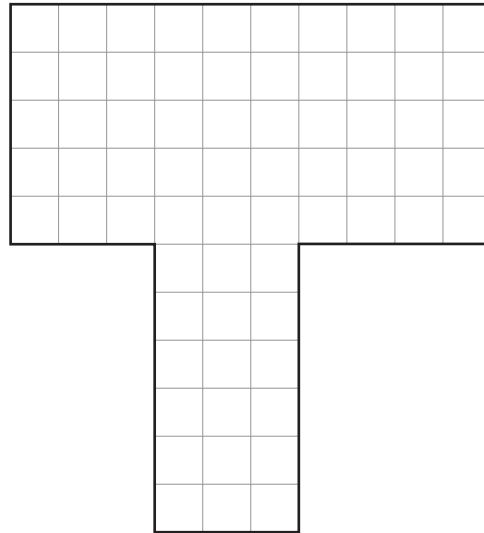
④ _____
(number sentences for areas of rectangles)

_____
(number sentence for area of whole shape)

Area of whole shape: _____ square units

⑤ How can the area of each rectangle help you find the area of the whole shape?

_____

_____