

HOME LINK
6•1

Line Segments, Rays, and Lines

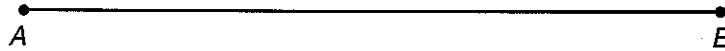


Family Note Help your child match each name below with the correct drawing of a line, ray, or line segment. Then observe as your child uses a straightedge to draw and label figures. Pages 100 and 101 in the *Student Reference Book* discuss these figures.

Please return this Home Link to school tomorrow.



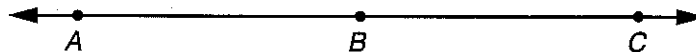
This line segment can be named \overline{AB} or \overline{BA} .



Each of these rays can be named \overrightarrow{YZ} .



This line can be named \overleftrightarrow{AB} , \overleftrightarrow{BA} , \overleftrightarrow{AC} , \overleftrightarrow{CA} , \overleftrightarrow{BC} , or \overleftrightarrow{CB} .



1. Match each drawing below with one of the names.

<u> b </u>		a. \overline{TS}
<u> </u>		b. \overrightarrow{RS}
<u> </u>		c. \overleftrightarrow{TS}
<u> </u>		d. \overleftrightarrow{SR}
<u> </u>		e. \overrightarrow{RS}

Follow the directions carefully. Use a straightedge.

2. Mark points B and C .

Draw a line segment, \overline{BC} .

3. Draw a ray, \overrightarrow{TO} .

Practice

Write these problems on the back of this page. Solve.

4. $479 + 89 = \underline{\hspace{2cm}}$


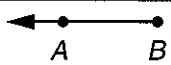
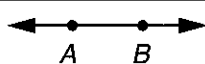
5. $278 + 68 = \underline{\hspace{2cm}}$

HOME LINK
6•2

More Line Segments, Rays, and Lines


Family Note

Refer to the following notations to help your child draw and label line segments, rays, and lines.

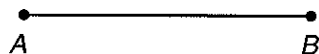
line segment AB	\overline{AB}	
ray BA	\overrightarrow{BA}	
line AB	\overleftrightarrow{AB}	

Please return this Home Link to school tomorrow.



Use a straightedge and a sharp pencil to draw the following. Be sure to mark points and label the line segments, rays, and lines.

1. Draw line segment \overline{YZ} , that is parallel to \overline{AB} .



2. Draw a ray, \overrightarrow{CD} , that intersects \overleftrightarrow{EF} .



3. Draw two parallel rays, \overrightarrow{IS} and \overrightarrow{NO} .

4. Draw two intersecting lines, \overleftrightarrow{MY} and \overleftrightarrow{AN} .

5. Draw a line segment \overline{PO} intersecting ray \overrightarrow{LA} .

6. Draw line \overleftrightarrow{PU} , parallel to ray \overrightarrow{RA} .

HOME LINK
6•3

Right Angles



Family Note Our class has been studying intersecting lines including lines that intersect at right angles. Help your child look for objects that have square corners or right angles—tables, pictures, the kitchen counter, a book, and so on.

Please return this Home Link to school tomorrow.

Find 4 things at home that have right angles (square corners).

Below, describe or draw a picture of each of these things. Bring your descriptions or your pictures to school to add to your Geometry Hunt.

HOME LINK
6•4**Triangles****Family Note**

Your child has been learning about the properties of triangles. Watch as your child completes the page.



For each problem, use a straightedge to connect the three points with three line segments. Show someone at home that the triangles match their descriptions. To measure triangles 1–3, cut out and use the ruler at the right. To find the right angle in triangle 4, use the square corner of a piece of paper.

1. equilateral triangle

All sides and angles are equal.

A •

B •

C •

2. isosceles triangle

Two sides are equal.

D •

F •

E •

3. scalene triangle

No sides are equal.

G •

I •

H •

4. right triangleThe triangle has a right angle ($\frac{1}{4}$ turn).

K •

J •

L •

**Practice**

Solve the following problems on the back of this page.

5. $584 - 93 =$ _____ 6. $823 - 534 =$ _____ 7. _____ $= 234 - 225$

HOME LINK
6•5

Quadrangles

**Family Note**

Help your child complete the statements. A *right angle* is a square corner. *Parallel sides* are the same distance apart and will never meet. *Opposite sides* are directly across from each other. *Adjacent sides* meet at a vertex (corner).

Please return this Home Link to school tomorrow.

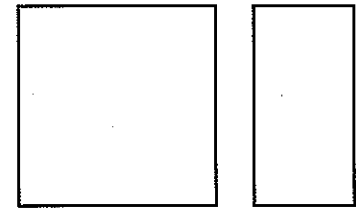


Fill in the blanks using the following terms: **equal** **parallel** **right angles**

1. Rectangle (Squares are special rectangles.)

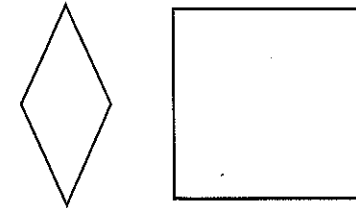
All angles are _____.

Pairs of opposite sides are _____ in length and _____ to each other.

**2. Rhombus** (Squares are also rhombuses.)

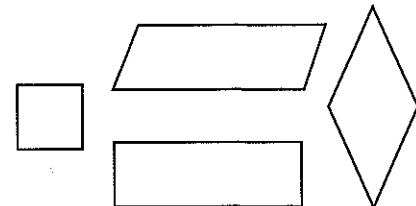
All sides are _____ in length.

Opposite sides are _____ to each other.

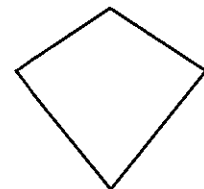
**3. Parallelogram** (Squares and rhombuses are also parallelograms.)

Opposite sides are _____ in length.

Opposite sides are _____ to each other.

**4. Kite**

Opposite sides are not _____ in length.

**Practice**

Solve.

5. $6 \times 3 =$ _____

6. _____ $= 3 \times 4$

7. $6 \times 6 =$ _____

HOME LINK
6•6

Naming Polygons

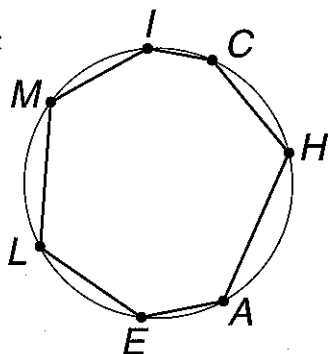
**Family Note**

Our class has been naming polygons. Help your child think of names with different numbers of letters, so that he or she can draw and name several different polygons.

Please return this Home Link to school tomorrow.



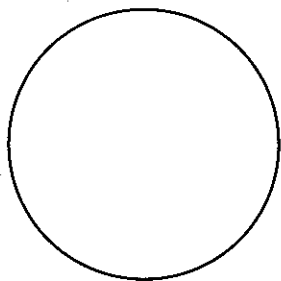
Think of names that have *different* letters. Use the letters to name points on each circle. Then use a pencil and a straightedge to connect the points to make a polygon. Count the number of sides. Name the polygon.

Example:

This polygon has 7 sides.

This polygon is a heptagon.

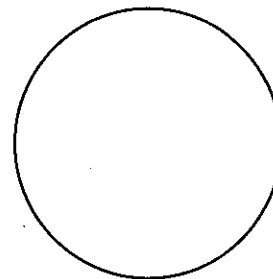
Its name is MICHAEL.

1.

This polygon has _____ sides.

This polygon is a _____.

Its name is _____.

2.

This polygon has _____ sides.

This polygon is a _____.

Its name is _____.

3. Draw more circles and polygons on the back of this paper. Why do you think each letter in a polygon's name can be used only once?

HOME LINK
6•7**Turns****Family Note**

If your child needs help with the following problems, consider putting up signs in a room in your home to indicate the directions north, south, east, and west. Do the turns with your child.

Please return this Home Link to school tomorrow.



left turn
counterclockwise



right turn
clockwise

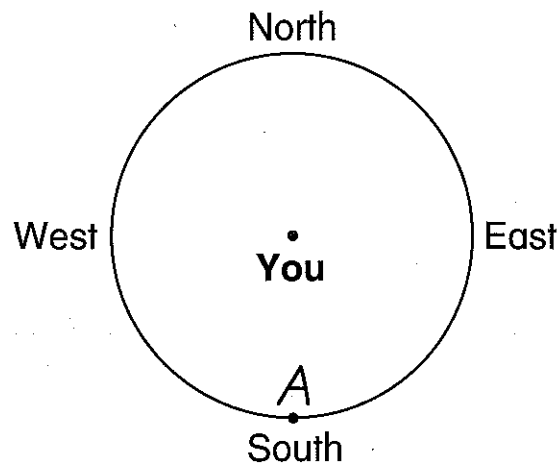
Make the turns described below. Show which way you face after each turn.

- ◆ Draw a dot on the circle.
- ◆ Label the dot with a letter.

Example: Face north.

Do a $\frac{1}{2}$ turn counterclockwise.

On the circle, mark the direction you are facing with the letter *A*.



1. Face north. Do a $\frac{1}{4}$ turn clockwise. Mark the direction you are facing with the letter *B*.
2. Face north. Do a $\frac{3}{4}$ turn clockwise. Mark the direction you are facing with the letter *C*.
3. Face east. Do a $\frac{1}{4}$ turn counterclockwise. Mark the direction you are facing with the letter *D*.
4. Face west. Make less than a $\frac{1}{4}$ turn clockwise. Mark the direction you are facing with the letter *E*.
5. Face north. Make a clockwise turn that is more than a $\frac{1}{2}$ turn, but less than a $\frac{3}{4}$ turn. Mark the direction you are facing with the letter *F*.
6. Face north. Make a counterclockwise turn that is less than a $\frac{1}{2}$ turn, but more than a $\frac{1}{4}$ turn. Mark the direction you are facing with the letter *G*.

HOME LINK
6•8

Degree Measures


Family Note

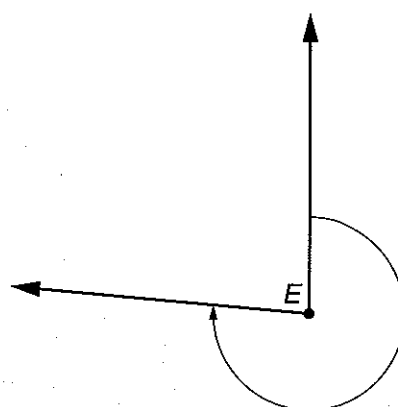
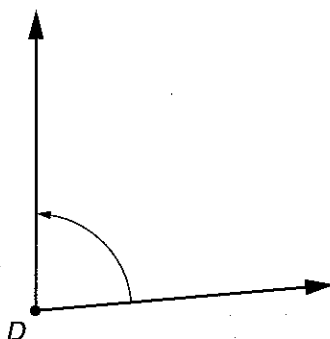
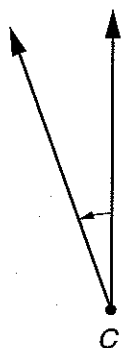
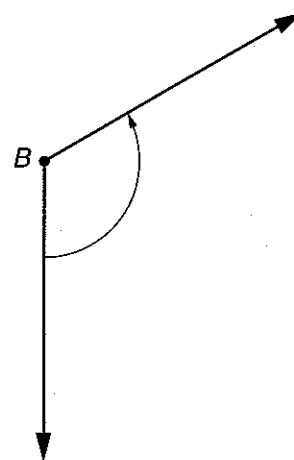
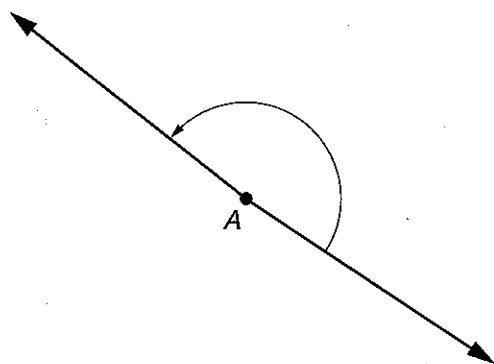
Our class has been learning about turns, angles, and angle measures. A full turn can be represented by an angle of 360° , a $\frac{1}{2}$ turn by an angle of 180° , a $\frac{1}{4}$ turn by an angle of 90° , and so on. Help your child match the measures below with the angles pictured. (It is not necessary to measure the angles with a protractor.)

Please return this Home Link to school tomorrow.

Tell which angle has the given measure.

1. about 180° angle _____
2. about 90° angle _____
3. about 270° angle _____
4. between 0° and 90° angle _____
5. between 90° and 180° angle _____

Rotation	Degrees
$\frac{1}{4}$ turn	90°
$\frac{1}{2}$ turn	180°
$\frac{3}{4}$ turn	270°
full turn	360°



HOME LINK
6•9

Symmetric Shapes


Family Note

Our class has been studying lines of symmetry—lines that divide figures into mirror images. Help your child look for symmetric shapes in books, newspapers, and magazines, and in objects around the house, such as windows, pieces of furniture, dishes, and so on.

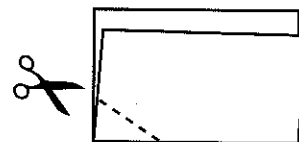
Please return this Home Link and your cutouts to school tomorrow.



1. Fold a sheet of paper in half. Cut off the folded corner, as shown. Before you unfold the cutoff piece, guess its shape.

- a. Unfold the cutoff piece.

What shape is it? _____



- b. How many sides of the cutoff

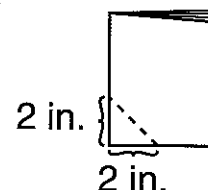
piece are the same length? _____

- c. How many angles are the same size? _____

- d. The fold is a line of symmetry. Does the cutoff

piece have any other lines of symmetry? _____

2. Fold another sheet of paper in half. Fold it in half again. Make a mark on both folded edges 2 inches from the folded corner. Cut off the folded corner. Before you unfold the cutoff piece, guess its shape.



- a. Unfold the cutoff piece. What shape is it? _____

- b. Are there any other lines of symmetry besides the fold lines? _____

- c. On the back of this paper, draw a picture of the cutoff shape. Draw all of its lines of symmetry.

HOME LINK
6•10

Congruent Figures

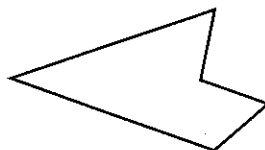
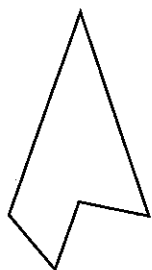
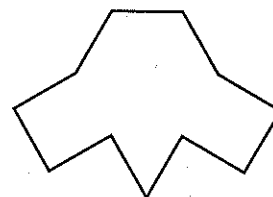
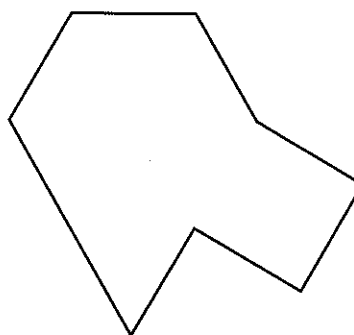
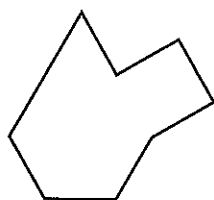
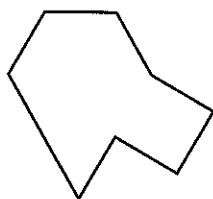
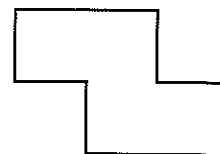
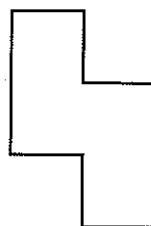
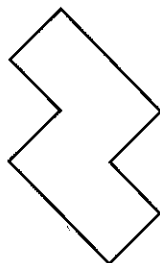
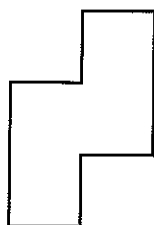
**Family Note**

If your child has difficulty determining the congruent shapes just by looking, encourage her or him to cut out the first shape. Your child can then rotate or flip the shape to find a congruent shape.

Please return this Home Link to school tomorrow.



Two figures that are exactly the same size and shape are called **congruent** figures. In each of the following, circle the shape or shapes that are congruent to the first shape. Explain to someone at home why the other shape or shapes are *not* congruent to the first.

1.**2.****3.**

3-Dimensional Shapes

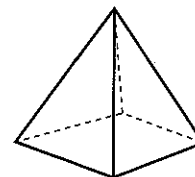
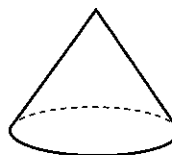
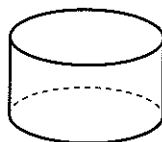
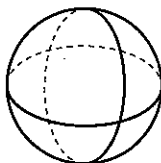
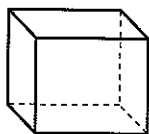
**Family Note**

Have your child identify 3-dimensional shapes. Then help search for 3-D objects (or pictures of objects) around your home for your child to bring to school. Pages 112–119 in the *Student Reference Book* discuss 3-D shapes.

Please return this Home Link to school tomorrow.

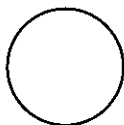


1. Identify the pictures of the 3-dimensional shapes below.
Use these words: *cone, prism, pyramid, cylinder, and sphere*.

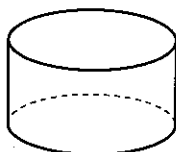


2. Look around your home for objects or pictures of objects that are shaped like cones, prisms, pyramids, cylinders, and spheres. Ask someone at home if you may bring some of the objects or pictures to school to share with the class. Draw the shapes you find or write the names.

3. Explain to someone the differences between 2-dimensional (2-D) and 3-dimensional (3-D) shapes.



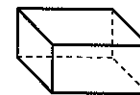
2-D



3-D



2-D



3-D

Practice

Write the problems on the back of this page. Solve.

4. $463 - 84 =$ _____

5. $54 - 29 =$ _____

HOME LINK
6•12

Making a Solid Shape

**Family Note**

Our class has been exploring the characteristics and parts of various 3-dimensional shapes—especially prisms. The pattern on this page can be used to make one type of prism. Prisms are named for the shapes of their bases.

Please return this Home Link to school tomorrow.



Cut on the dashed lines. Fold on the dotted lines. Tape or paste each TAB inside or outside the shape.

Discuss the following questions with someone at home:

1. What is this 3-D shape called? _____
2. What is the shape of the bases? _____
3. What is the shape of the other faces? _____
4. How many edges does the shape have? _____
5. How many vertices does the shape have? _____

