Unit 8: Family Letter

Home Link 7-13

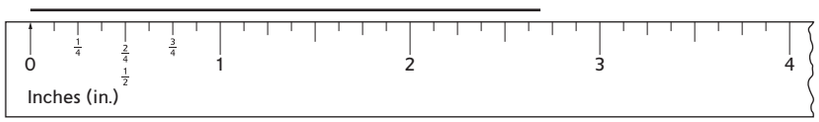
NAME DATE TIME

Multiplication and Division

In this unit your child will deepen his or her understandings of measurement, multiplication and division, and geometric shapes.

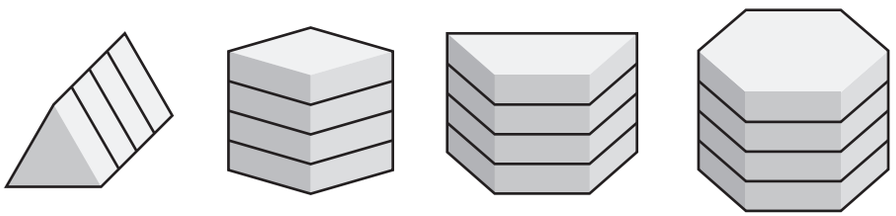
In Unit 8, children will:

- Use a ruler to measure lengths to the nearest $\frac{1}{4}$ inch.



This line segment is about $2\frac{3}{4}$ inches long.

- Develop strategies for solving extended multiplication and division facts.
- Recognize and determine factor pairs of counting numbers within 100.
- Model equal-sharing situations involving money amounts.
- Apply understanding of factors while playing *Factor Bingo.*
- Extend work with fraction comparisons and equivalents.
- Examine features of rectangles with given area measurements.
- Explore the attributes of prisms.



Children construct prisms with pattern blocks and explore common attributes.

Please keep this Family Letter for reference as your child works through Unit 8.

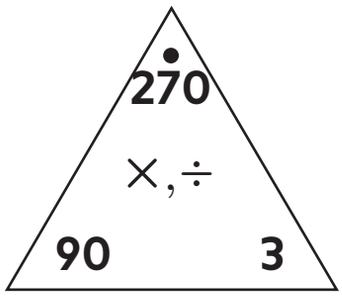
Vocabulary

Important terms in Unit 8:

base of a prism Either of the two parallel faces of a prism that are used to name it. (*See prism.*) *Example:* The base of a triangular prism is a triangle.

edge A line segment where two faces of a 3-dimensional shape meet.

extended fact A variation of a basic fact involving multiples of 10, 100, and so on. *Example:* The extended fact $3 \times 90 = 270$ is a variation of $3 \times 9 = 27$.



$90 \times 3 = 270$
$3 \times 90 = 270$
$270 \div 90 = 3$
$270 \div 3 = 90$

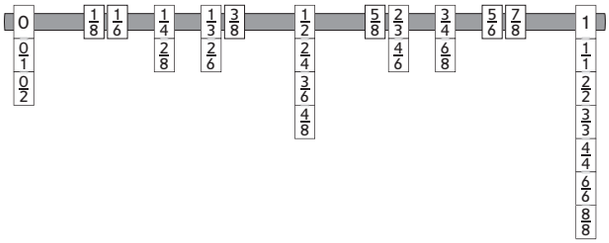
Extended Fact Triangle and extended fact family for 3, 90, and 270

face A flat surface that helps form the outside of a 3-dimensional shape.

factor pair Two counting numbers that multiply together to give a specified product. The specified product may have more than one factor pair. For example, the factor pairs for 18 are 1 and 18, 2 and 9, and 3 and 6.

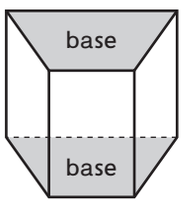
multiple of 10 A product of 10 and a counting number. *Example:* 80 is a multiple of 10 because $10 \times 8 = 80$.

plot To mark a location on a number line, graph, map, or chart.

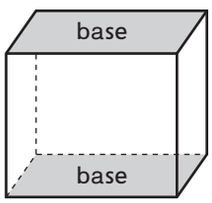


polyhedron A closed 3-dimensional figure whose surfaces are all flat and formed by polygons.

prism A polyhedron that has two parallel bases that are the same size and shape. The faces connecting the bases are all rectangles. Prisms take their names from the shape of their bases.



Trapezoidal prism



Rectangular prism

product The solution to a multiplication problem. *Example:* In $4 \times 7 = 28$, the product is 28.

3-dimensional (3-D) figure Solid shapes that have volume. Rectangular prisms and spheres are 3-dimensional figures.

2-dimensional (2-D) figure Flat shapes that have area but not volume. Rectangles and triangles are 2-dimensional figures.

vertex A point where edges of a polyhedron meet.

Do-Anytime Activities

The following activities provide practice for concepts taught in this and previous units.

1. Challenge your child to solve extended multiplication facts mentally by using a related basic fact. *Example:* $7 \times 50 = ?$ Use $7 \times 5 = 35$ and think 7×5 [10s] $= 35$ [10s] or 350.
2. Have your child find and use mathematical language (bases, faces, edges, vertices, and so on) to describe real-world examples of rectangular prisms. *Examples:* books, buildings, boxes, and other containers
3. Pose equal-sharing situations. Encourage your child to act out the situation using cards or pennies, or by drawing a picture. *Example:* 3 friends equally share 39 baseball cards. How many cards does each child get? $3 \times 10 = 30$. There are 9 left over and $3 \times 3 = 9$, so each child gets 3 more. $10 + 3 = 13$. Each child gets 13 baseball cards.
4. Ask your child to find factor pairs for a given number and say the resulting multiplication sentence. *Example:* 20. $4 \times 5 = 20$, so 4 and 5 are a factor pair of 20.
5. Use a ruler or tape measure to measure objects to the nearest $\frac{1}{4}$ inch.

Building Skills through Games

In Unit 8 your child will play the following games to practice identifying factors of counting numbers and to locate fractions on number lines. For detailed instructions, see the *Student Reference Book.*

Finding Factors Players use counters to mark factors on a strip. They multiply the factors together to find and circle products on the gameboard.

Factor Bingo Players choose products to write in their game mat. They turn over a number card to generate a factor and find products with that factor on their mat. The first player to cover 5 products in a row or have 12 products covered wins.

Fraction Number-Line Squeeze The leader thinks of a mystery fraction. Two players place brackets over each end of the number line. As players guess the mystery fraction, the leader states whether his or her fraction is greater or less than the guess and moves a bracket accordingly. Play continues until one player guesses the mystery fraction or the fraction is "squeezed" between the brackets.

As You Help Your Child with Homework

As your child brings home assignments, you may want to go over the instructions together, clarifying them as necessary. The answers listed below will guide you through this unit's Home Links.

Home Link 8-1

Answers vary.

Home Link 8-2

1. $8 \times 20 = 160$
   $20 \times 8 = 160$
   $160 \div 8 = 20$
   $160 \div 20 = 8$
2. $9 \times 30 = 270$
   $30 \times 9 = 270$
   $270 \div 9 = 30$
   $270 \div 30 = 9$
3. $6 \times 40 = 240$
   $40 \times 6 = 240$
   $240 \div 6 = 40$
   $240 \div 40 = 6$
4. Answers vary.

Home Link 8-3

1. Sample answers: 1 row with 18 chairs, 3 rows with 6 chairs, 6 rows with 3 chairs, 2 rows with 9 chairs; 1, 18; 2, 9; The number of rows and the number of chairs in each row are factors of 18.
2. Sample answers: 5, 8; 2, 20
3. Sample answers: 1, 72; 8, 9
4. Sample answers: 1, 150; 3, 50

Home Link 8-4

1. Sample answers:

   X X X X X X
   X X X X X X
   X X X X X X
   X X X X X X

   X X X X X X X X
   X X X X X X X X
   X X X X X X X X

2. Answers vary.

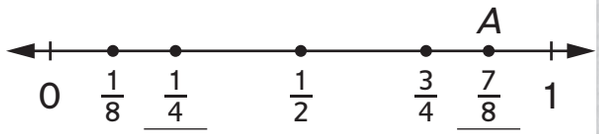
Home Link 8-5

Sample answers: 10, 9, 60, 8, 21, 12, 16, 18, 15, 20, 24

Home Link 8-6

1. Sample answer: D; the number of dollars for each person; $\$76 \div 4 = D$; $4 \times D = \$76$; \$19
2. 16
3. 14
4. Sample answer: If I have the same amount of money shared with more people, each person would have to get less. So $\$90 \div 5$ is more than $\$90 \div 6$.

Home Link 8-7

1. 

2. Sample answers: I saw the distance from fraction A to 1 was about the same distance as 0 to $\frac{1}{8}$. So, I knew fraction A was $\frac{7}{8}$. I know that $\frac{3}{4}$ is equivalent to $\frac{6}{8}$, so the next point is $\frac{7}{8}$.
3. 28
4. 48
5. 7
6. 8

Home Link 8-8

1. Triangles
2. Rectangles
3. 3
4. Triangular prism