Math Connections for Parents

Welcome to Third Grade Module 7. In the final module of the year, students will spend much time on word problems, particularly those involving area and perimeter. Students will also investigate geometry, through polygons, tangrams and tetrominoes. They will then investigate perimeter and area using those shapes.

Important Words and Concepts

- Attribute: any characteristic of a shape (e.g. blue, straight sides, 4 angles)
- Diagonal: line draw between opposite corners of a quadrilateral
- Perimeter: length of the sides of a two-dimensional shape, could be called boundary
- Property: e.g. having all sides equal in length
- Regular polygon: polygon whose side lengths and interior angles are all equal
- Tessellate: to tile or cover a plane without gaps or overlaps
- Tetrominoes: four shares arranged to form a shape so that every square shares at least one side with another square

KEY STANDARDS

- Solve two-step problems using the four operations (+, -, x, ÷)
- Represent problems with a letter standing for an unknown quantity (e.g. 3 x a = 21)
- Tell if an answer is reasonable using mental computation and rounding
- Measure using rulers marked with halves and fourths of an inch.
- Show data on a line plot
- Solve real-world problems involving perimeters of polygons
- Understand that shapes in different categories have different attributes and sometimes share attributes
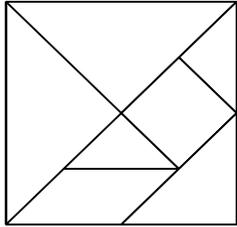
Multiplication and Division within 100

By the end of third grade, students are expected to have mastered their multiplication and division facts, up to 100. Students will apply that knowledge to problem solving and word problem with these facts. Over the summer, continue to practice, as these skills will be needed in fourth grade math.

Newark City Schools

"Committed to Excellence. One Student at a Time."

For more resources, please visit www.newarkcityschools.org → Parent Math Academy K-5

Graphics and Strategies you may see…

A **Tangram Puzzle** lets students explore attributes of shapes.
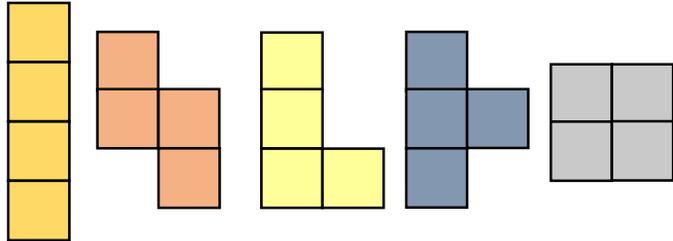
Tetrominoes are four squares arranged so that all share one side. They will be used to explore area.

In word problems, students will be asked to explain the reasoning of other students as they solve problems involving area and perimeter.

Example: Mr. Spooner draws a regular hexagon on the board. One of the sides measures 4 centimeters. Giles and Xander find the perimeter. Their work is shown below. Whose work is correct? Explain your answer.

Giles' Work
Perimeter = 4 cm + 4 cm + 4 cm + 4 cm + 4 cm + 4 cm
Perimeter = 24 cm

Xander's Work
Perimeter = 6 × 4 cm
Perimeter = 24 cm

They are both right! A regular hexagon has 6 equal sides. Giles added 4 six times and Xander multiplied the number of sides by the length of each side. Both equations show the perimeter of the regular hexagon.

NEWARK CITY SCHOOLS

"Committed to Excellence. One Student at a Time."

For more resources, please visit www.newarkcityschools.org → Parent Math Academy K-5

Math Connections for Parents

Students will use a **line plot** to display data.

Number of Rectangles Made With Unit Squares

Number of Unit Squares Used

X = 1 rectangle
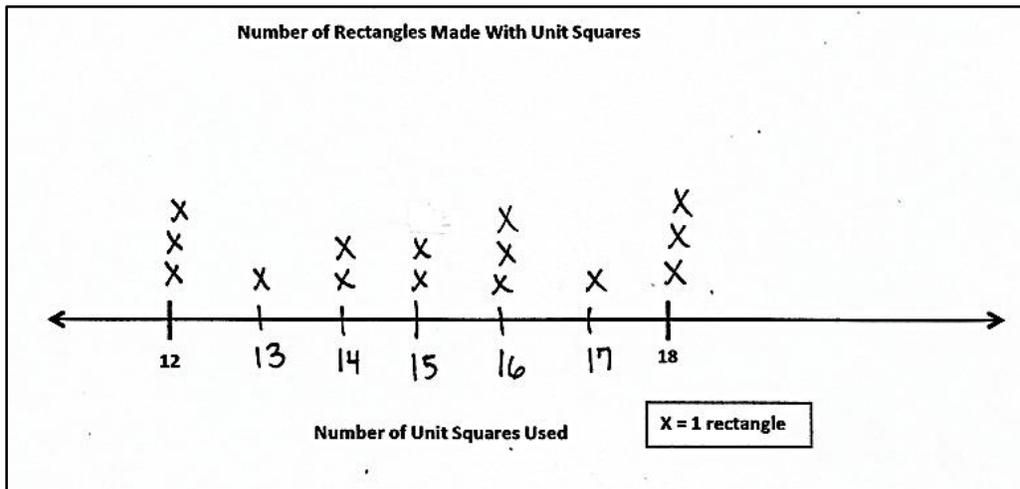
Other word problems involve a real-world example, such as fencing for a pet. Word problems will often involve multiple steps or ask students to perform more than one operation to solve.

Example: Colton buys a roll of wire fencing that is 120 yards long. He uses it to fence in his 18 yard by 24 yard rectangular garden. Will Colton have enough wire fencing left over to fence in a 6 yard by 8 yard rectangular play space for his pet rabbit?

24yd / 18 yd

$P = 24yd + 18yd + 24yd + 18yd$

$P = 42yd + 42yd$

$P = 84yd$

120 | 84 | w

$W = 120 - 84$

$W = 36yds$

8yd / 6yd

$P = (2 \times 8yd) + (2 \times 6yd)$

$= 16yd + 12yd$

$P = 28yd$

Yes, he will have enough wire because he has 36 yds, but only needs 28yds

NEWARK CITY SCHOOLS

"Committed to Excellence. One Student at a Time."

For more resources, please visit www.newarkcityschools.org → Parent Math Academy K-5