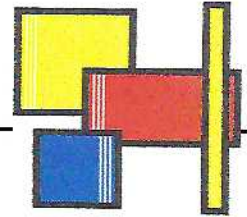


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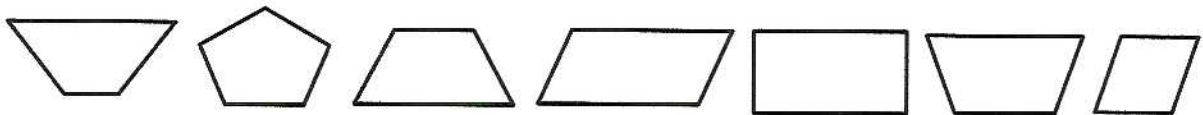


Quadrilateral Questions

1. How many sides does a quadrilateral have? 1. _____
2. How many pairs of parallel sides does a rectangle have? 2. _____
3. How many pairs of parallel sides does a trapezoid have? 3. _____
4. Name two quadrilaterals in which all the sides have an equal length. 4. _____

5. Name two quadrilaterals that have four right angles. 5. _____

6. Color the trapezoid that is next to the rhombus.



7. List three ways a rectangle and a square are alike.

8. List one way a parallelogram and a rhombus are different.

Fill in the blanks under each quadrilateral statement with the correct word.

Word Bank: trapezoid parallelogram four rectangle square polygon four parallel four one rhombus

9. A quadrilateral is a _____ with _____ sides.
10. A _____ is a quadrilateral with only _____ pair of parallel sides.
11. A _____ is a quadrilateral with all of its sides the same length. It has four right angles.
12. A parallelogram has two pairs of sides that are _____ and opposite angles that are equal.
13. A _____ is a quadrilateral with two pairs of parallel sides. All of its sides are the same length.
14. A square is always a rectangle because a square is a special type of rectangle that has _____ equal sides.
15. A _____ is a quadrilateral that has opposite sides that are parallel and the same length.
16. A _____ is a quadrilateral with all of its sides the same length. It has two pairs of parallel sides.
17. A _____ is a quadrilateral with two pair of opposite parallel sides.

Understand Categories of Two-Dimensional Figures



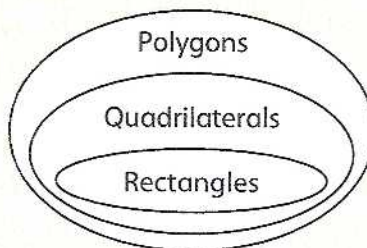
Dear Family,

This week your child is exploring relationships among categories of two-dimensional figures.

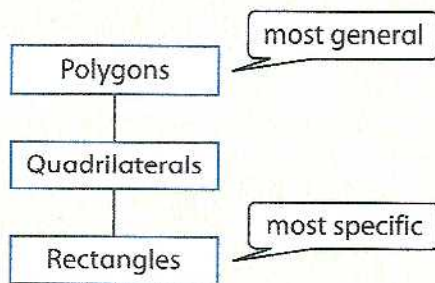
You can group polygons, or closed figures with straight sides, by their **attributes**. Some attributes of polygons are the number of sides or angles they have.

When you place figures in a group, you can form a **category** and one or more **subcategories**. You can use a **hierarchy** to order groups of figures. The top of the hierarchy shows the category for the most general group. As you go down a hierarchy, you can see how the subcategories are related.

Diagrams can show the hierarchy of categories and subcategories. The **Venn diagram** at the right shows the relationship between polygons, quadrilaterals, and rectangles. The diagram shows that all rectangles are quadrilaterals but that not all quadrilaterals are rectangles. The diagram also shows that all quadrilaterals are polygons but that not all polygons are quadrilaterals.



A **tree diagram** also can show relationships among two-dimensional figures. The tree diagram at the right shows the hierarchy of polygons from top to bottom. Polygons, the most general category, are shown at the top of the hierarchy. Rectangles, the most specific category, are shown at the bottom of the hierarchy.



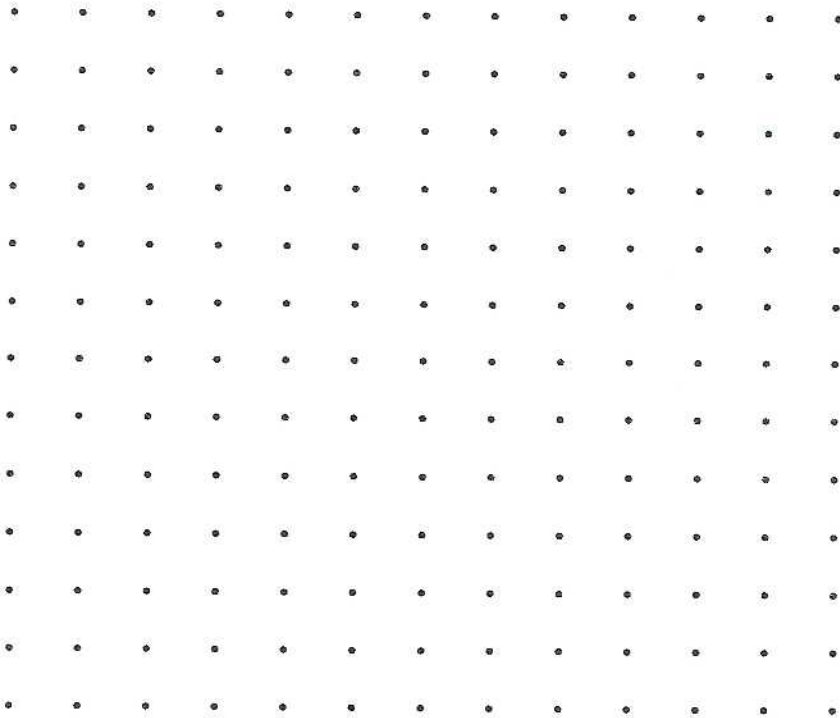
Invite your child to share what he or she understands about relationships among categories of two-dimensional figures by doing the following activity together.

ACTIVITY CATEGORIES OF TWO-DIMENSIONAL FIGURES

Do this activity with your child to understand categories of two-dimensional figures.

Work with your child to draw two-dimensional figures that share a common attribute.

- Use the dot paper below. The first person describes an attribute of a figure, and the second person draws and names the figure.
- Switch roles. The person who goes first now repeats the attribute that was said and adds another attribute to the description. The second person draws and names the figure.
- For example:
 - The first person says *a three-sided figure*. The second person draws and names a triangle.
 - Switch roles. The first person says *a three-sided figure with a right angle*. The second person draws and names a right triangle.
- When you are finished, describe the category-subcategory relationship for your figures: Example: Right triangles are a subcategory of triangles.



Classify Two-Dimensional Figures



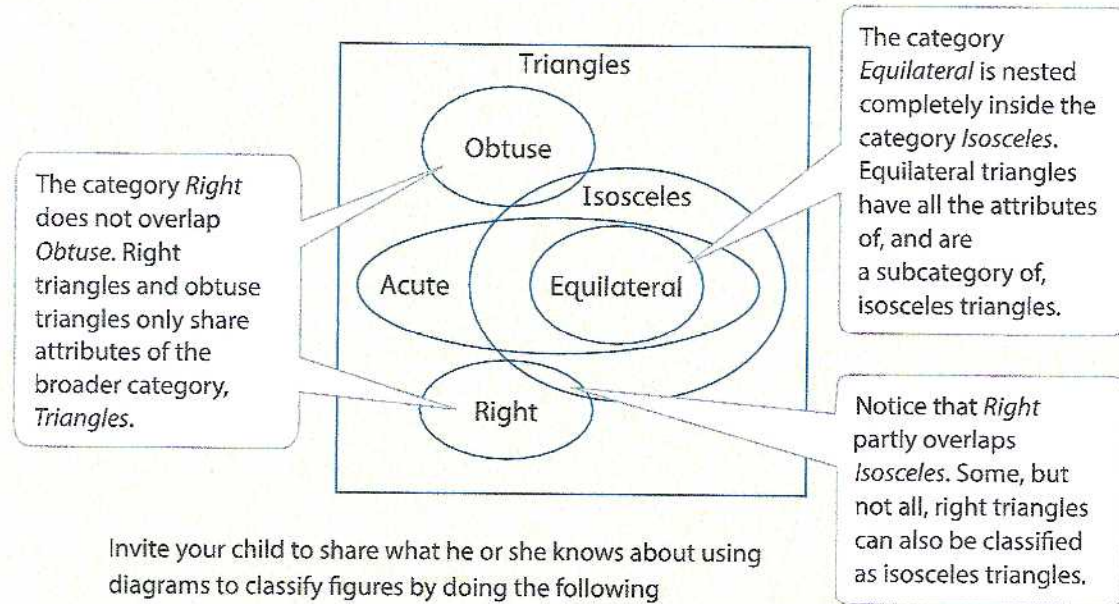
Dear Family,

This week your child is continuing to make diagrams to classify two-dimensional figures.

Your child will continue to explore how Venn diagrams and tree diagrams can be used to show relationships among categories of two-dimensional figures.

Figures can be grouped into categories by their attributes or properties, such as the number of their sides and angles, the length of their sides, and the measure of their angles. Your child knows all figures in a category share at least one attribute. While subcategories share the attribute(s) of the broader category, figures in subcategories have additional specific properties.

Your child knows how to use Venn diagrams or tree diagrams to show that one category is a subcategory of another. Now your child will use more complex diagrams to classify figures. The Venn diagram below shows "Triangles" as the broader category. The labeled ovals represent subcategories of triangles.



Invite your child to share what he or she knows about using diagrams to classify figures by doing the following activity together.

ACTIVITY CLASSIFYING TWO-DIMENSIONAL FIGURES

Do this activity with your child to classify two-dimensional figures.

Work together with your child to describe how figures are classified in Venn diagrams.

- Look at the figures in the Venn diagrams below and talk about how the figures are related to each other.
- Work together to describe the attributes of the figures. Tell what attributes the figures do and do not share. The words in the box describe some attributes of figures that you might use in your discussion.

three sides	equilateral	isosceles
right angle	acute angle	obtuse angle
equal side lengths	different side lengths	

- Write category names in each oval to classify the shapes.

