Your child can understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category.

- Classify and name a polygon when given the attributes without a visual picture.

- Sort polygons, especially quadrilaterals, into different subcategories by explaining the criterion used to sort the polygons.

- Compare and contrast the different polygons.

- Justify, explain, and debate the categorizing of different types of polygons.
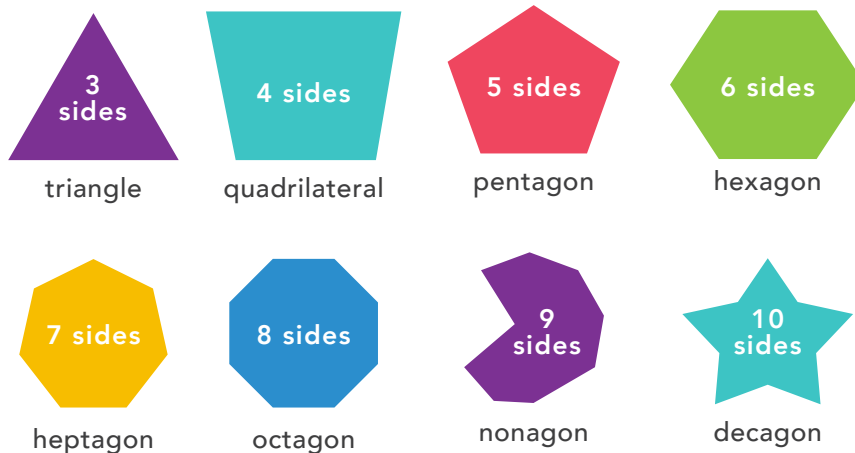
HELP AT HOME

▸ Play "What am I?" Read off clues (attributes) about a polygon. Your child will guess what polygon you are describing.

▸ Cut polygons out of paper. Your child will sort the polygons into different groups based on their similar (or same) attributes. Have your child explain why he grouped them the way he did.

ATTRIBUTES

Examples of attributes include side length, angle size, how many sides, etc.

RESOURCES

A **POLYGON** is a simple closed shape made up of straight line segments only. Polygons are classified according to the number of sides they have.

| 3 sides triangle | 4 sides quadrilateral | 5 sides pentagon | 6 sides hexagon |
| 7 sides heptagon | 8 sides octagon | 9 sides nonagon | 10 sides decagon |

Your child can classify two-dimensional figures in a hierarchy based on properties.

- Classify, draw, and name the polygon when given the attributes without a visual picture.

- Explain why squares are unique among quadrilaterals.

- Create a hierarchy of polygons, such as quadrilaterals, sorted with those with the most attributes and narrowing down to those with the fewest attributes.

HELP AT HOME

‣ List all the attributes of polygons on individual cards. Have your child put the cards in order from most attributes to least. Then have him name each polygon described on the cards.

RESOURCES

COORDINATE PLANE GRAPH
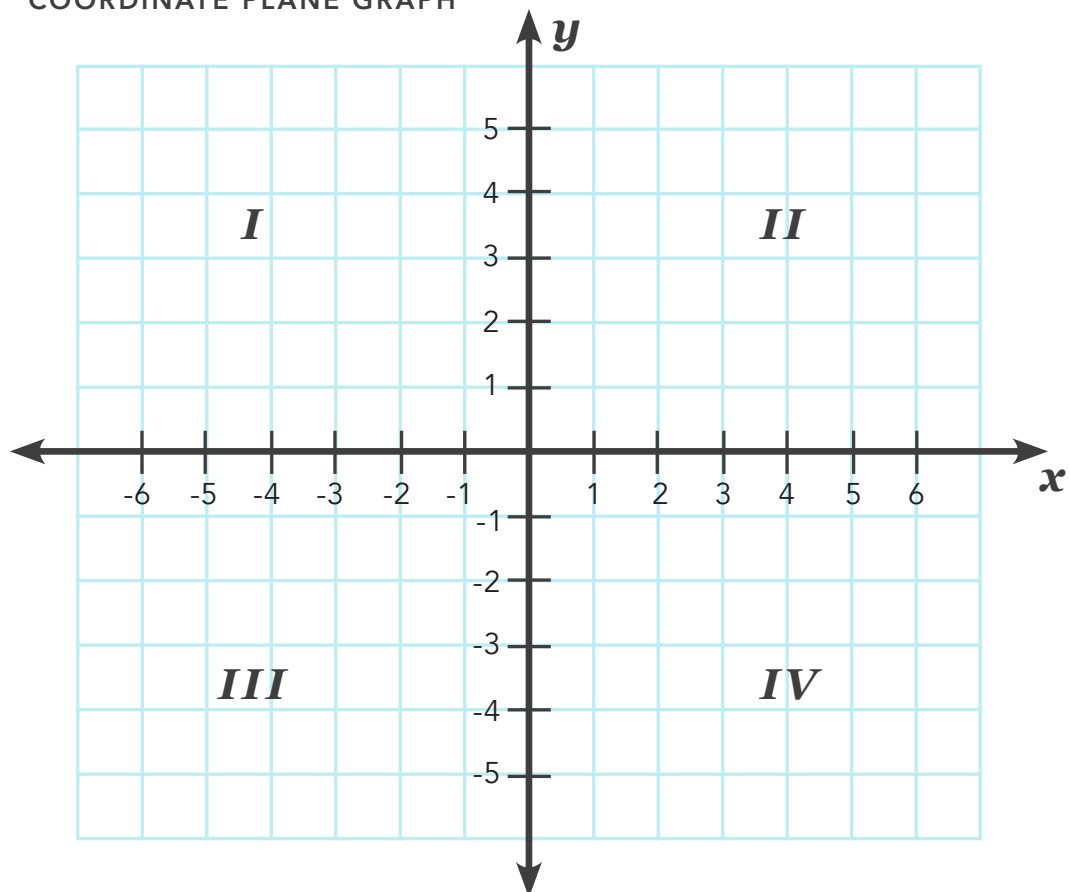
NOTE: x = x axis and y = y axis. Roman numerals **I, II, III** and **IV** indicate the quadrants. The origin is the center (where the x axis and y axis meet on this diagram).