10.2 Polygons and Quadrilaterals

Goal: Classify polygons and quadrilaterals.

Vocabulary

Polygon:	closed plane figure with many sides
Regular polygon:	congruent sides & congruent angles
Convex polygon:	
Concave polygon:	
Diagonal of a polygon:	
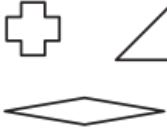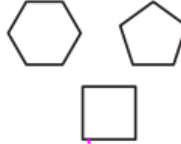
poly = many

Polygons	Regular polygons	Not polygons

The name *n*-gon refers to a polygon that has *n* sides. For example, a 15-gon is a polygon that has 15 sides.
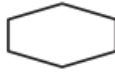
Names of Other Polygons

Polygons	Pentagon	Hexagon	Heptagon	Octagon	*n*-gon
Number of sides	5	6	7	8	*n*

16-gon
20-gon
79-gon

Example 1   *Identifying and Classifying Polygons*

Tell whether the figure is a polygon. If it is a polygon, classify it
and tell whether it is *convex* or *concave*. If not, explain why.

a.

b.
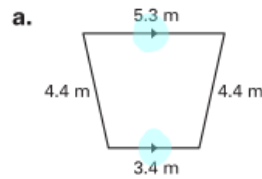
yes it's a polygon
hexagon
convex

No it's not a polygon
b/c it has curved
sides

Quadrilaterals	Diagram
Trapezoid A **trapezoid** is a quadrilateral with exactly **1** pair of parallel sides.	
Parallelogram A **parallelogram** is a quadrilateral with both pairs of opposite sides parallel.	
Rhombus A **rhombus** is a parallelogram with 4 congruent sides.	
Rectangle A *rectangle* is a parallelogram with 4 right angles.	
Square A *square* is a parallelogram with 4 right angles and 4 congruent sides.	