

Adapted from Aichele, D.B., Hopfensperger, P.W., Leiva, M.A., Mason, M.M., Murphy, S.J., Schell, V.J., Vheru, M.C. (1998). Geometry: Exploration and application. Evanston, IL: McDougal Littell, 339-345.

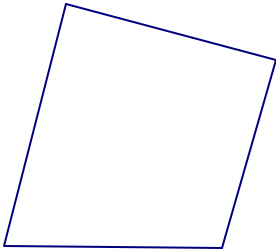
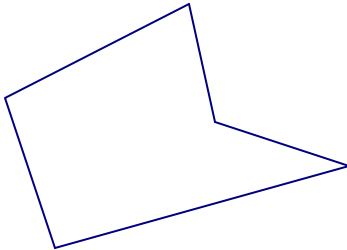
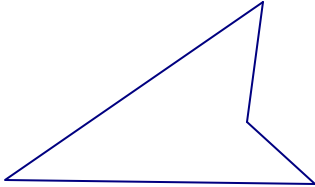
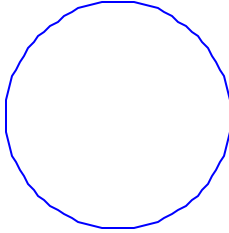
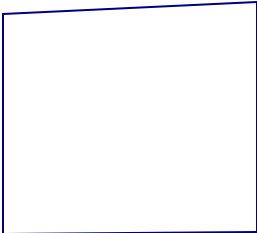
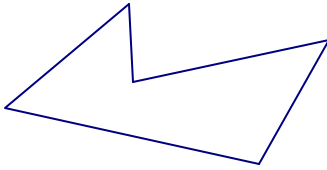
Worksheet #1

Name: _____

Date: _____

QUADRILATERALS

A. Concept Attainment

Quadrilaterals	
Examples	Nonexamples
	
	
	

B. Open "quadrilateral.gsp." Fill in the following:

- \overline{AB} and \overline{BC} are **adjacent sides**. They share a common vertex. Name three other pairs of adjacent sides:

a. _____ and _____ b. _____ and _____ c. _____ and _____

2. \overline{AB} and \overline{DC} are **opposite sides**. They do not share a common vertex. Name another pair of opposite sides: _____ and _____
3. $\angle DAB$ and $\angle ABC$ are **consecutive angles**. They share a common segment. Name three other pairs of consecutive angles:
 - a. _____ and _____
 - b. _____ and _____
 - c. _____ and _____
4. $\angle DAB$ and $\angle DCB$ are **opposite angles**. Name another pair of opposite angles: _____ and _____
5. \overline{AC} is a **diagonal**. How many diagonals can you draw in ABCD? _____

C. Open “classifyingquad.gsp”. Use the Geometer’s Sketchpad features to answer the following:

1. A **parallelogram** is a quadrilateral with both pairs of opposite sides parallel. Name the parallelogram(s): _____

2. A **rectangle** is a parallelogram with four right angles. Name the rectangle(s): _____

3. A **rhombus** is a parallelogram with four congruent sides. Name the rhombus (rhombi): _____
4. A **square** is a parallelogram with four right angles and four congruent sides. Name the square(s): _____

5. A **trapezoid** is a quadrilateral with exactly one pair of parallel sides. Name the trapezoid(s): _____

D. For each quadrilateral in “classifyingquad.gsp”, name a) adjacent sides b) opposite sides c) consecutive angles d) opposite angles and e) diagonals.

Name						
Adjacent Sides						
Opposite Sides						
Consecutive Angles						
Opposite Angles						
Diagonals						

E. Construct each type of quadrilateral defined in Part C. Use all Geometer's Sketchpad features. Name the file, "quad.gsp".