Shape Detective Sort

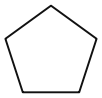
Look for closed shapes made of straight sides.

3.MG.4 "The student will identify, describe, classify, compare, combine, and subdivide polygons. Describe a polygon as a closed plane figure composed of at least three line segments that do not cross..."

NAME _____ DATE _____

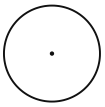
POLYGON

A polygon is a closed, flat shape with at least three straight sides. Its sides do not cross.

Example shape 

NOT A POLYGON

A shape is not a polygon if it has a curved side, is not closed, or has sides that cross.

Example shape 

1 SORT

8 items

Circle POLYGON or NOT POLY for each figure, then pick two figures and explain how you knew.

1. 

Figure 1

POLYGON NOT POLY

2. 

Figure 2

POLYGON NOT POLY

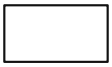
3. 

Figure 3

POLYGON NOT POLY

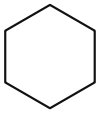
4. 

Figure 4

POLYGON NOT POLY

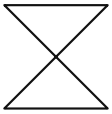
5. 

Figure 5

POLYGON NOT POLY

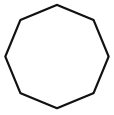
6. 

Figure 6

POLYGON NOT POLY

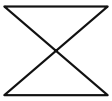
7. 

Figure 7

POLYGON NOT POLY

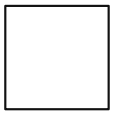
8. 

Figure 8

POLYGON NOT POLY

2 PROVE IT

Explain your thinking

Pick two items from Part 1. For each one, tell how you knew where it belonged.

ITEM # _____ **HOW I KNEW** _____

ITEM # _____ **HOW I KNEW** _____

3 MAKE YOUR OWN

One of each

Draw one new POLYGON and one new NOT POLY shape. Label each shape.

POLYGON

NOT POLY

CHALLENGE

Draw a polygon with 5 sides. Then draw a line inside it to make a triangle and a quadrilateral.

ANSWER KEY

Shape Detective Sort

GRADE 3 · 3.MG.4

PART 1 · SORT

#	ITEM	CATEGORY	WHY
1	Figure 1 (triangle)	**POLYGON**	It is closed and has 3 straight sides that do not cross.
2	Figure 2 (semicircle)	**NOT POLY**	It has a curved side.
3	Figure 3 (rectangle)	**POLYGON**	It is closed and has 4 straight sides that do not cross.
4	Figure 4 (hexagon)	**POLYGON**	It is closed and has 6 straight sides that do not cross.
5	Figure 5 (polygon)	**NOT POLY**	Its sides cross.
6	Figure 6 (octagon)	**POLYGON**	It is closed and has 8 straight sides that do not cross.
7	Figure 7 (polygon)	**NOT POLY**	Its sides cross.
8	Figure 8 (square)	**POLYGON**	It is closed and has 4 straight sides that do not cross.

PART 2 · PROVE IT

Accept any explanation that names the deciding feature from the rule box for the chosen item.

PART 3 · MAKE YOUR OWN (SAMPLE ANSWERS)

- **POLYGON**: Draw a trapezoid.
- **NOT POLY**: Draw a shape with one curved side.

Challenge: Draw a pentagon. Draw one line from a corner to a non-neighboring corner, making one triangle and one quadrilateral.

For Part 2, accept explanations that name the needed features, such as closed, straight sides, no crossing sides, or a curved side. For the challenge, the line must start and end at two vertices of the pentagon.