

Shape Detective Sort

Look for closed shapes with straight sides.

NY-2.G.1 "Classify two-dimensional figures as polygons or non-polygons."

NAME _____

DATE _____

POLYGON

A polygon is a closed, flat shape made only of straight sides. Its sides meet at corners.

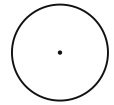
A hexagon is a polygon.



NOT A POLYGON

A figure is not a polygon if it has a curved side or if it is not closed. It may not have corners where all sides meet.

A circle is not a polygon.



1 SORT _____ 8 items

Part 1 SORT: Circle POLYGON or NO POLYGON for each figure; **Part 2 PROVE IT:** Pick two figures and explain how you knew where each one belongs.

1.

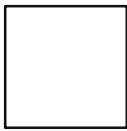


Figure 1

POLYGON

NO POLYGON

2.

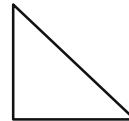


Figure 2

POLYGON

NO POLYGON

3.



Figure 3

POLYGON

NO POLYGON

4.

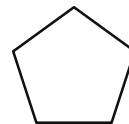


Figure 4

POLYGON

NO POLYGON

5.

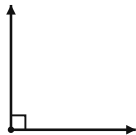


Figure 5

POLYGON

NO POLYGON

6.

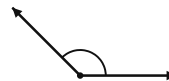


Figure 6

POLYGON

NO POLYGON

7.



Figure 7

POLYGON

NO POLYGON

8.



Figure 8

POLYGON

NO POLYGON

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

Part 3 MAKE YOUR OWN: Write one new example of a polygon and one new example of a figure that is not a polygon.

POLYGON

NO POLYGON

CHALLENGE

Draw a closed figure with 5 straight sides, then write the category it belongs to.

PART 1 • SORT

#	ITEM	CATEGORY	WHY
1	Figure 1 (square)	POLYGON	It is closed and has four straight sides.
2	Figure 2 (right_triangle)	POLYGON	It is closed and has three straight sides.
3	Figure 3 (semicircle)	NO POLYGON	It has a curved side.
4	Figure 4 (pentagon)	POLYGON	It is closed and has five straight sides.
5	Figure 5 (angle 90°)	NO POLYGON	Its two sides do not close to make a shape.
6	Figure 6 (angle 135°)	NO POLYGON	Its two sides do not close to make a shape.
7	Figure 7 (trapezoid)	POLYGON	It is closed and has four straight sides.
8	Figure 8 (rectangle)	POLYGON	It is closed and has four straight sides.

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:** A closed shape with 7 straight sides.
- **NO POLYGON:** An open shape made with two straight lines.

Challenge: A closed figure with 5 straight sides belongs in POLYGON.

For Part 2, students should explain that polygon figures are closed and have only straight sides. Figures 3, 5, and 6 are not polygons because Figure 3 has a curve and Figures 5 and 6 are not closed.