

Five Side Search

Count sides and vertices to find five-sided shapes.

NY-3.G.1 "Recognize and classify polygons based on the number of sides and vertices (triangles, quadrilaterals, pentagons, and hexagons). Identify shapes that do not belong to one of the given subcategories."

NAME _____

DATE _____

FIVE-SIDED SHAPES

A five-sided shape has 5 straight sides and 5 vertices.
It is called a pentagon.

Example: This shape has 5
straight sides and 5 vertices.



NOT FIVE-SIDED

A shape belongs here if it does not have exactly 5
straight sides and 5 vertices.

Example: This shape has 8 sides,
so it is not five-sided.



1 SORT _____ 8 items

Part 1 SORT: Circle the category for each figure; Part 2 PROVE IT: Pick two figures, one from each category, and write how the number of sides and vertices proves each choice.

1.



Figure 1

FIVE SIDES

NOT FIVE

2.

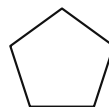


Figure 2

FIVE SIDES

NOT FIVE

3.

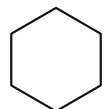


Figure 3

FIVE SIDES

NOT FIVE

4.

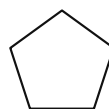


Figure 4

FIVE SIDES

NOT FIVE

5.



Figure 5

FIVE SIDES

NOT FIVE

6.



Figure 6

FIVE SIDES

NOT FIVE

7.



Figure 7

FIVE SIDES

NOT FIVE

8.

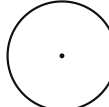


Figure 8

FIVE SIDES

NOT FIVE

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 five-sided shape and one new example of a shape that is not five-sided.

FIVE SIDES

NOT FIVE

CHALLENGE

Choose a shape with 3, 4, or 6 sides. Write its name, its number of sides and vertices, and why it belongs in Not Five.

PART 1 • SORT

#	ITEM	CATEGORY	WHY
1	Figure 1 (pentagon)	FIVE SIDES	It has 5 straight sides and 5 vertices.
2	Figure 2 (pentagon)	FIVE SIDES	It has 5 straight sides and 5 vertices.
3	Figure 3 (hexagon)	NOT FIVE	It has 6 straight sides and 6 vertices.
4	Figure 4 (pentagon)	FIVE SIDES	It has 5 straight sides and 5 vertices.
5	Figure 5 (triangle)	NOT FIVE	It has 3 straight sides and 3 vertices.
6	Figure 6 (square)	NOT FIVE	It has 4 straight sides and 4 vertices.
7	Figure 7 (pentagon)	FIVE SIDES	It has 5 straight sides and 5 vertices.
8	Figure 8 (circle)	NOT FIVE	It has a curved edge and no vertices.

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)

- **FIVE SIDES:** Five-sided shape: an irregular pentagon.
- **NOT FIVE:** sided shape: a rectangle.

Challenge: A hexagon has 6 sides and 6 vertices, so it belongs in Not Five.

Answers: 1 FIVE SIDES, 2 FIVE SIDES, 3 NOT FIVE, 4 FIVE SIDES, 5 NOT FIVE, 6 NOT FIVE, 7 FIVE SIDES, 8 NOT FIVE. For Part 2, accept explanations that correctly count sides and vertices for one figure in each category.