

Side Count Sort

Count the sides and vertices of each polygon.

2.8.C "classify and sort polygons with 12 or fewer sides according to attributes, including identifying the number of sides and number of vertices;"

NAME _____

DATE _____

HAS 5 SIDES

A polygon with 5 sides has 5 vertices, or corners. Count each straight side once.

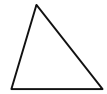
This pentagon has 5 sides and 5 vertices.



DOES NOT HAVE 5 SIDES

Some polygons have more or fewer than 5 sides. Count the sides and vertices to check.

This triangle has 3 sides and 3 vertices.



1 SORT _____ 8 items

For Part 1, circle FIVE SIDES or NOT FIVE for each figure, then for Part 2, choose two item numbers and explain how you counted their sides and vertices.

1.

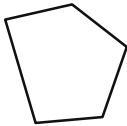


Figure 1

FIVE
SIDES

NOT
FIVE

2.



Figure 2

FIVE
SIDES

NOT
FIVE

3.

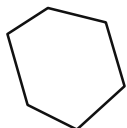


Figure 3

FIVE
SIDES

NOT
FIVE

4.

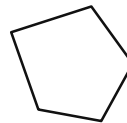


Figure 4

FIVE
SIDES

NOT
FIVE

5.

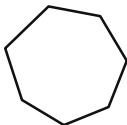


Figure 5

FIVE
SIDES

NOT
FIVE

6.

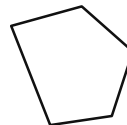


Figure 6

FIVE
SIDES

NOT
FIVE

7.

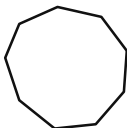


Figure 7

FIVE
SIDES

NOT
FIVE

8.

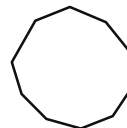


Figure 8

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

For Part 3, write one new example of a polygon with 5 sides and one new example of a polygon that does not have 5 sides.

FIVE SIDES _____

NOT FIVE _____

CHALLENGE

Draw a polygon with 7 sides, and mark each vertex with a dot.

PART 1 • SORT

#	ITEM	CATEGORY	WHY
1	Figure 1 (polygon)	FIVE SIDES	The polygon has 5 sides and 5 vertices.
2	Figure 2 (rectangle)	NOT FIVE	The rectangle has 4 sides and 4 vertices.
3	Figure 3 (polygon)	NOT FIVE	The polygon has 6 sides and 6 vertices.
4	Figure 4 (polygon)	FIVE SIDES	The polygon has 5 sides and 5 vertices.
5	Figure 5 (polygon)	NOT FIVE	The polygon has 7 sides and 7 vertices.
6	Figure 6 (polygon)	FIVE SIDES	The polygon has 5 sides and 5 vertices.
7	Figure 7 (polygon)	NOT FIVE	The polygon has 9 sides and 9 vertices.
8	Figure 8 (polygon)	NOT FIVE	The polygon has 10 sides and 10 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:** A polygon with 5 sides and 5 vertices.
- **NOT FIVE:** A polygon with 8 sides and 8 vertices.

Challenge: A 7-sided polygon with 7 dots, one dot at each vertex.

Part 1 answers are 1 FIVE SIDES, 2 NOT FIVE, 3 NOT FIVE, 4 FIVE SIDES, 5 NOT FIVE, 6 FIVE SIDES, 7 NOT FIVE, and 8 NOT FIVE. For Part 2, accept explanations that correctly count the same number of sides and vertices.