

# Side Count Sort

Decide which figures have exactly four straight sides.

**5.GSR.8.2** "Determine, through exploration and investigation, that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category."

NAME \_\_\_\_\_

DATE \_\_\_\_\_

## HAS FOUR STRAIGHT SIDES

A figure with exactly four straight sides is a quadrilateral. Equal sides or special angles do not change the number of sides.

A four-sided picture frame belongs here.

## DOES NOT HAVE FOUR STRAIGHT SIDES

These figures have fewer or more than four straight sides, or they have curved edges.

A six-sided tile belongs here.

### 1 SORT

8 items

For each figure, circle its category, then choose two items and explain how their sides show your choices.

1. a rectangle

FOUR SIDES

NOT FOUR

2. a rhombus

FOUR SIDES

NOT FOUR

3. a triangle

FOUR SIDES

NOT FOUR

4. a trapezoid

FOUR SIDES

NOT FOUR

5. a circle

FOUR SIDES

NOT FOUR

6. a pentagon

FOUR SIDES

NOT FOUR

7. a kite

FOUR SIDES

NOT FOUR

8. a parallelogram

FOUR SIDES

NOT FOUR

## 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

Write one new example for FOUR SIDES and one new example for NOT FOUR.

**FOUR SIDES** \_\_\_\_\_

\_\_\_\_\_

**NOT FOUR** \_\_\_\_\_

\_\_\_\_\_

### CHALLENGE

A figure has four equal sides and four right angles. Which category does it belong to? Explain why.

\_\_\_\_\_

\_\_\_\_\_

**PART 1 • SORT**

| # | ITEM            | CATEGORY          | WHY                                                  |
|---|-----------------|-------------------|------------------------------------------------------|
| 1 | a rectangle     | <b>FOUR SIDES</b> | A rectangle has four straight sides.                 |
| 2 | a rhombus       | <b>FOUR SIDES</b> | A rhombus has four straight sides.                   |
| 3 | a triangle      | <b>NOT FOUR</b>   | A triangle has three straight sides.                 |
| 4 | a trapezoid     | <b>FOUR SIDES</b> | A trapezoid has four straight sides.                 |
| 5 | a circle        | <b>NOT FOUR</b>   | A circle has a curved edge, not four straight sides. |
| 6 | a pentagon      | <b>NOT FOUR</b>   | A pentagon has five straight sides.                  |
| 7 | a kite          | <b>FOUR SIDES</b> | A kite has four straight sides.                      |
| 8 | a parallelogram | <b>FOUR SIDES</b> | A parallelogram 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)**

- **FOUR SIDES:** a square
- **NOT FOUR:** a decagon

**Challenge:** FOUR SIDES. The figure has four straight sides, so it is a quadrilateral.

Accept any correct new example that matches the stated number of straight sides. For Part 2, students should use side counts or curved edges as evidence.