

Side Count Detectives

Use sides to name and compare polygons.

GRADE 3 • 3.MG.4.e

3.MG.4.e "Classify and compare polygons (triangles, quadrilaterals, pentagons, hexagons, octagons)."

NAME _____

DATE _____

COUNT THE SIDES

A polygon is a closed shape made only of straight sides. To classify a polygon, count its sides and use its polygon name. To compare polygons, decide which one has more or fewer sides.

WORKED EXAMPLE

Compare a pentagon and a hexagon. Which polygon has more sides?

1. Count the sides of the pentagon: 5.
2. Count the sides of the hexagon: 6.
3. Since 6 is greater than 5, the hexagon has more sides.

Answer: hexagon

PRACTICE 6 problems

- 1** A closed shape has 3 straight sides. What is its polygon name?

ANSWER _____

- 2** A closed shape has 4 straight sides. What is its polygon name?

ANSWER _____

- 3** A closed shape has 8 straight sides. What is its polygon name?

ANSWER _____

- 4** Which polygon has fewer sides, a quadrilateral or a pentagon?

ANSWER _____

- 5** Which pair has the same number of sides? triangle and triangle; quadrilateral and pentagon; hexagon and octagon

ANSWER _____

- 6** Which polygon has the most sides, a triangle, a quadrilateral, or an octagon?

ANSWER _____

APPLY IT Show your work

- 1** Ava is making a space-game token. She can choose a triangle, a pentagon, or an octagon token. She wants the token with the most sides. Which token should she choose?

WORK SPACE

ANSWER _____

- 2** Leo sorts robot-button stickers that are a quadrilateral, a hexagon, and a triangle. He needs the sticker with the fewest sides. Which sticker should he use?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

Put these polygons in order from fewest sides to most sides: octagon, triangle, hexagon, quadrilateral, pentagon. Explain how you know.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	A closed shape has 3 straight sides. What is its polygon name?	triangle
2	A closed shape has 4 straight sides. What is its polygon name?	quadrilateral
3	A closed shape has 8 straight sides. What is its polygon name?	octagon
4	Which polygon has fewer sides, a quadrilateral or a pentagon?	quadrilateral
5	Which pair has the same number of sides? triangle and triangle; quadrilateral and pentagon; hexagon and octagon	triangle and triangle
6	Which polygon has the most sides, a triangle, a quadrilateral, or an octagon?	octagon

PART 2 • APPLY IT

1. **octagon** Compare the side counts of the three polygons. An octagon has more sides than a pentagon and a triangle.
2. **triangle** Compare the side counts of the three polygons. A triangle has fewer sides than a quadrilateral and a hexagon.

CHALLENGE

triangle, quadrilateral, pentagon, hexagon, octagon. Each polygon in the list has more sides than the one before it.

Accept polygon names with or without capital letters. For the challenge, accept the correct order and an explanation that the side counts increase from left to right.