

Side Match Sort

Sort, explain two items, and create examples.

4.MG.5.d.iii "Compare, contrast, and classify quadrilaterals (parallelograms, rectangles, squares, rhombi, and/or trapezoids) based on the following properties and attributes: congruence of sides; and"

NAME _____

DATE _____

ALL SIDES EQUAL

Put a quadrilateral here when all four sides are congruent. Congruent sides have the same length.

A garden plot has four edges that are all the same length.

SIDES NOT ALL EQUAL

Put a quadrilateral here when at least one side has a different length. Its four sides are not all congruent.

A window frame has two long edges and two shorter edges.

1 SORT _____ 8 items

Read each description and circle ALL EQUAL or NOT EQUAL.

- | | | |
|---|---------------------------------|---------------------------------|
| 1. A quadrilateral has side lengths 4 cm, 4 cm, 4 cm, and 4 cm. | ☐ ALL EQUAL | ☐ NOT EQUAL |
| 2. A square has side length 6 cm. | ☐ ALL EQUAL | ☐ NOT EQUAL |
| 3. A quadrilateral has side lengths 3 cm, 3 cm, 5 cm, and 5 cm. | ☐ ALL EQUAL | ☐ NOT EQUAL |
| 4. A rhombus has side length 7 cm. | ☐ ALL EQUAL | ☐ NOT EQUAL |
| 5. A rectangle is 8 cm long and 2 cm wide. | ☐ ALL EQUAL | ☐ NOT EQUAL |
| 6. A trapezoid has side lengths 4 cm, 4 cm, 4 cm, and 6 cm. | ☐ ALL EQUAL | ☐ NOT EQUAL |
| 7. A quadrilateral has side lengths 5 cm, 5 cm, 5 cm, and 5 cm. | ☐ ALL EQUAL | ☐ NOT EQUAL |
| 8. A parallelogram has two sides that are 9 cm and two sides that are 3 cm. | ☐ ALL EQUAL | ☐ NOT EQUAL |

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 quadrilateral example for ALL EQUAL and one new quadrilateral example for NOT EQUAL.

ALL EQUAL _____

NOT EQUAL _____

CHALLENGE

A quadrilateral has four sides that are each 8 cm long. Name two shapes it could be, and explain why.

PART 1 • SORT

#	ITEM	CATEGORY	WHY
1	A quadrilateral has side lengths 4 cm, 4 cm, 4 cm, and 4 cm.	ALL EQUAL	All four side lengths are 4 cm.
2	A square has side length 6 cm.	ALL EQUAL	A square has four sides of the same length.
3	A quadrilateral has side lengths 3 cm, 3 cm, 5 cm, and 5 cm.	NOT EQUAL	The sides have two different lengths, 3 cm and 5 cm.
4	A rhombus has side length 7 cm.	ALL EQUAL	A rhombus has four sides of the same length.
5	A rectangle is 8 cm long and 2 cm wide.	NOT EQUAL	Its long sides are 8 cm and its short sides are 2 cm.
6	A trapezoid has side lengths 4 cm, 4 cm, 4 cm, and 6 cm.	NOT EQUAL	One side is 6 cm, while the other three are 4 cm.
7	A quadrilateral has side lengths 5 cm, 5 cm, 5 cm, and 5 cm.	ALL EQUAL	All four side lengths are 5 cm.
8	A parallelogram has two sides that are 9 cm and two sides that are 3 cm.	NOT EQUAL	The sides are not all the same length.

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)

- **ALL EQUAL:** A square with side length 9 cm.
- **NOT EQUAL:** A rectangle that is 3 cm long and 5 cm wide.

Challenge: It could be a square or a rhombus. Both shapes have four congruent sides.

For Part 2, students may choose any two items. A correct explanation states that all four sides match or identifies side lengths that do not match.