

Marks Tell Truth

Circle each claim, pick two to explain, then create marked claims.

4.MG.5.e "Denote properties of quadrilaterals and identify parallel sides, congruent sides, and right angles by using geometric markings."

NAME _____

DATE _____

CLAIMS THAT MATCH

The claim agrees with the marking. Matching arrow marks show parallel sides, and matching tick marks show congruent sides.

A small square at a corner means the angle is 90° .

CLAIMS THAT ARE NOT TRUE

The claim does not agree with the marking. Arrow marks do not show equal length, and tick marks do not show parallel sides.

A small square does not show that the nearby sides are congruent.

1 SORT 8 items

For each marked quadrilateral, circle MATCHES or NOT TRUE for the claim.

- | | | | |
|----|---|-------------------------------|--------------------------------|
| 1. | Quadrilateral ABCD has matching arrow marks on AB and CD. Claim:
AB and CD are parallel. | ☐ MATCHES | ☐ NOT TRUE |
| 2. | Quadrilateral PQRS has matching tick marks on PQ and QR. Claim: PQ and QR are parallel. | ☐ MATCHES | ☐ NOT TRUE |
| 3. | Quadrilateral EFGH has matching arrow marks on EF and GH. Claim: EF and GH are congruent. | ☐ MATCHES | ☐ NOT TRUE |
| 4. | Quadrilateral JKLM has matching double tick marks on JK and LM. Claim: JK and LM are congruent. | ☐ MATCHES | ☐ NOT TRUE |
| 5. | Quadrilateral TUVW has matching single tick marks on TU and UV. Claim: TU and UV are congruent. | ☐ MATCHES | ☐ NOT TRUE |
| 6. | Quadrilateral WXYZ has matching arrow marks on WX and YZ. Claim: WX and YZ are congruent. | ☐ MATCHES | ☐ NOT TRUE |
| 7. | Quadrilateral GHIJ has matching double tick marks on GH and IJ. Claim: GH and IJ are congruent. | ☐ MATCHES | ☐ NOT TRUE |
| 8. | Quadrilateral MNOP has matching arrow marks on MN and OP. Claim: MN and OP are parallel. | ☐ MATCHES | ☐ NOT TRUE |

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 marked claim that MATCHES and one new marked claim that is NOT TRUE.

MATCHES

NOT TRUE

CHALLENGE

Draw a quadrilateral with one pair of parallel sides, one pair of congruent sides, and one right angle. Use arrow marks, tick marks, and a small square.

PART 1 • SORT

#	ITEM	CATEGORY	WHY
1	Quadrilateral ABCD has matching arrow marks on AB and CD. Claim: AB and CD are parallel.	MATCHES	Matching arrow marks show parallel sides.
2	Quadrilateral PQRS has matching tick marks on PQ and QR. Claim: PQ and QR are parallel.	NOT TRUE	Matching tick marks show congruent sides, not parallel sides.
3	Quadrilateral EFGH has matching arrow marks on EF and GH. Claim: EF and GH are congruent.	NOT TRUE	Matching arrow marks show parallel sides, not congruent sides.
4	Quadrilateral JKLM has matching double tick marks on JK and LM. Claim: JK and LM are congruent.	MATCHES	Matching double tick marks show congruent sides.
5	Quadrilateral TUVW has matching single tick marks on TU and UV. Claim: TU and UV are congruent.	MATCHES	Matching single tick marks show congruent sides.
6	Quadrilateral WXYZ has matching arrow marks on WX and YZ. Claim: WX and YZ are congruent.	NOT TRUE	Matching arrow marks show parallel sides, not congruent sides.
7	Quadrilateral GHIJ has matching double tick marks on GH and IJ. Claim: GH and IJ are congruent.	MATCHES	Matching double tick marks show congruent sides.
8	Quadrilateral MNOP has matching arrow marks on MN and OP. Claim: MN and OP are parallel.	MATCHES	Matching arrow marks show parallel 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)

- **MATCHES:** Quadrilateral CATS has matching triple tick marks on CA and TS. Claim: CA and TS are congruent.
- **NOT TRUE:** Quadrilateral NEST has a small square at angle N. Claim: NE and NT are congruent.

Challenge: Draw square ABCD. Mark AB and CD with matching arrows, mark AB and BC with matching tick marks, and place a small square at angle A.

Answers: 1 MATCHES, 2 NOT TRUE, 3 NOT TRUE, 4 MATCHES, 5 MATCHES, 6 NOT TRUE, 7 MATCHES, 8 MATCHES. For Part 2, accept explanations that correctly connect arrow marks to parallel sides or tick marks to congruent sides.