

Shape Claim Sort

Check whether each cut makes the named polygons.

3.MG.4.g "Subdivide a three-sided or four-sided polygon into no more than three parts and name the resulting polygons."

NAME _____

DATE _____

CORRECT CLAIM

The names match the polygons made by the cuts.
Trace each closed part and count its sides.

A trapezoid is cut from one corner to the opposite corner. The two parts are triangles.

INCORRECT CLAIM

At least one name does not match a polygon made by the cuts. Trace the part and count its sides again.

A kite is cut from its top corner to its bottom corner. The two parts are quadrilaterals.

1 SORT

8 items

For each claim, circle CORRECT or INCORRECT, then in Part 2 choose two claims and explain how you knew.

1. A square is cut along a diagonal. The two parts are triangles. CORRECT INCORRECT

2. A triangle is cut from one vertex to the middle of the opposite side. It makes a triangle and a quadrilateral. CORRECT INCORRECT

3. A rectangle has two segments from its top-left corner to two different points on its bottom side. It makes three triangles. CORRECT INCORRECT

4. A parallelogram is cut along a diagonal. It makes two triangles. CORRECT INCORRECT

5. A triangle is cut by a segment joining points on two of its sides. It makes a triangle and a quadrilateral. CORRECT INCORRECT

6. A square has a segment from the middle of its top side to the middle of its bottom side. It makes two triangles. CORRECT INCORRECT

7. A rectangle is cut along a diagonal from its upper-left corner to its lower-right corner. It makes a triangle and a quadrilateral. CORRECT INCORRECT

8. A triangle has two segments from one vertex to two points on the opposite side. It makes three triangles. CORRECT INCORRECT

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 CORRECT claim and one new INCORRECT claim about cuts in a three-sided or four-sided polygon.

CORRECT

INCORRECT

CHALLENGE

Draw a quadrilateral divided into three parts. Name all three parts and explain why your names are correct.

PART 1 • SORT

#	ITEM	CATEGORY	WHY
1	A square is cut along a diagonal. The two parts are triangles.	CORRECT	A diagonal of a square creates two three-sided polygons.
2	A triangle is cut from one vertex to the middle of the opposite side. It makes a triangle and a quadrilateral.	INCORRECT	The cut creates two triangles, not a triangle and a quadrilateral.
3	A rectangle has two segments from its top-left corner to two different points on its bottom side. It makes three triangles.	INCORRECT	The parts are two triangles and one quadrilateral.
4	A parallelogram is cut along a diagonal. It makes two triangles.	CORRECT	A diagonal of a parallelogram creates two triangles.
5	A triangle is cut by a segment joining points on two of its sides. It makes a triangle and a quadrilateral.	CORRECT	One part has three sides and the other part has four sides.
6	A square has a segment from the middle of its top side to the middle of its bottom side. It makes two triangles.	INCORRECT	The segment creates two quadrilaterals.
7	A rectangle is cut along a diagonal from its upper-left corner to its lower-right corner. It makes a triangle and a quadrilateral.	INCORRECT	A diagonal of a rectangle creates two triangles.
8	A triangle has two segments from one vertex to two points on the opposite side. It makes three triangles.	CORRECT	The two segments divide the triangle into three three-sided parts.

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)

- **CORRECT:** A trapezoid is cut along a diagonal. The two parts are triangles.
- **INCORRECT:** A triangle has a segment from one vertex to the opposite side. It makes two quadrilaterals.

Challenge: Draw a rectangle. Draw two segments from its upper-left corner to two different points on its bottom side. The parts are two triangles and one quadrilateral. Each named part has the matching number of sides.

Part 2 explanations should identify the number of sides in the resulting parts. For Part 3, accept different valid claims when the cut description and polygon names match.