Triangle Side Sort

Compare all three side lengths.

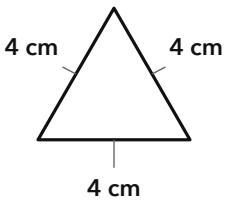
5.GR.B.3.a "Classify triangles based on properties (e.g., angle measure, side lengths)."

NAME _____ DATE _____

ALL SIDES EQUAL

All three sides have the same length. This is an equilateral triangle.

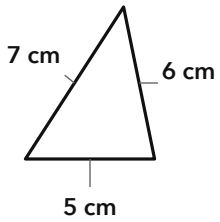
Sides: 4 cm, 4 cm, 4 cm



NOT ALL SIDES EQUAL

At least one side has a different length. Two sides might still be equal.

Sides: 5 cm, 6 cm, 7 cm



1 SORT

8 items

Part 1: Circle EQUAL or OTHER for each figure; Part 2: choose two figures and explain how their side lengths prove your choices.

1.

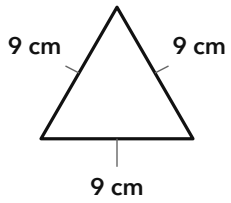


Figure 1

EQUAL **OTHER**

2.

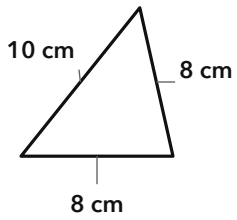


Figure 2

EQUAL **OTHER**

3.

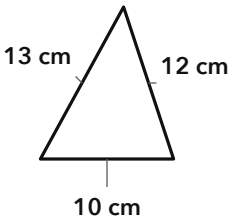


Figure 3

EQUAL **OTHER**

4.

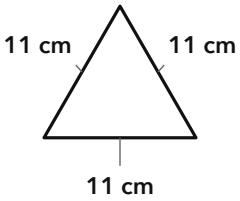


Figure 4

EQUAL **OTHER**

5.

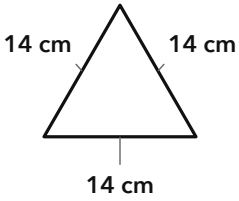


Figure 5

EQUAL **OTHER**

6.

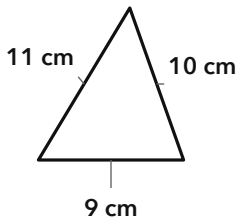


Figure 6

EQUAL **OTHER**

7.

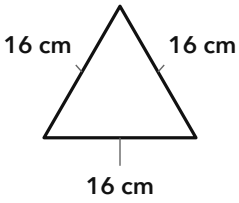


Figure 7

EQUAL **OTHER**

8.

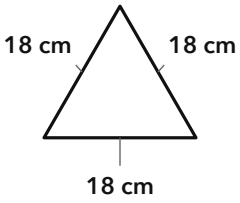


Figure 8

EQUAL **OTHER**

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

Part 3: Write three side lengths for one new EQUAL triangle and one new OTHER triangle.

EQUAL _____

OTHER _____

CHALLENGE

Can a triangle have exactly two sides of the same length and be EQUAL? Give three side lengths and explain.

ANSWER KEY

Triangle Side Sort

GRADE 5 · 5.GR.B.3.a

PART 1 · SORT

#	ITEM	CATEGORY	WHY
1	Figure 1 (equilateral)	**EQUAL**	All three sides are 9 cm.
2	Figure 2 (isosceles)	**OTHER**	The 10 cm side differs from the two 8 cm sides.
3	Figure 3 (triangle)	**OTHER**	The three side lengths differ.
4	Figure 4 (equilateral)	**EQUAL**	All three sides are 11 cm.
5	Figure 5 (equilateral)	**EQUAL**	All three sides are 14 cm.
6	Figure 6 (triangle)	**OTHER**	The three side lengths differ.
7	Figure 7 (equilateral)	**EQUAL**	All three sides are 16 cm.
8	Figure 8 (equilateral)	**EQUAL**	All three sides are 18 cm.

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)

- **EQUAL**: 15 cm, 15 cm, 15 cm
- **OTHER**: 15 cm, 16 cm, 17 cm

Challenge: No. A triangle with sides 8 cm, 8 cm, and 9 cm has exactly two equal sides, so it belongs in OTHER.

For Part 2, accept any two explanations that compare all three labeled side lengths. Figures 2 and 6 are OTHER even though Figure 2 has two equal sides.