Triangle Corner Sort

Sort triangles by their angles, then make your own.

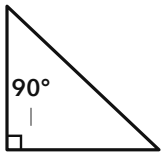
5.GM.1 "Describe, identify, classify, and construct two- and three-dimensional figures using their geometric attributes. Describe, identify, classify, and construct triangles (equilateral, right, scalene..."

NAME _____ DATE _____

RIGHT TRIANGLE

A right triangle has one right angle. A right angle measures 90° and looks like a square corner.

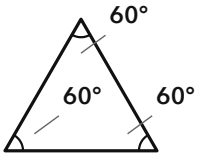
This triangle has a 90° angle.



NOT A RIGHT TRIANGLE

A triangle is not a right triangle if none of its angles measures 90°.

Each angle in this triangle measures 60°.



1 SORT

8 items

For each figure, circle RIGHT or NOT RIGHT, then choose two figures and explain how you know where each belongs.

1.

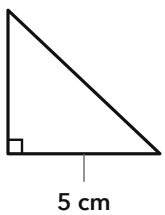


Figure 1

RIGHT NOT RIGHT

2.

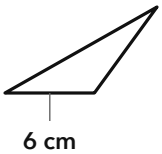


Figure 2

RIGHT NOT RIGHT

3.

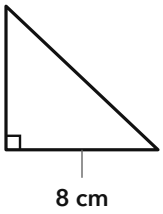


Figure 3

RIGHT **NOT RIGHT**

4.

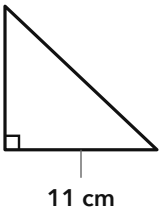


Figure 4

RIGHT **NOT RIGHT**

5.

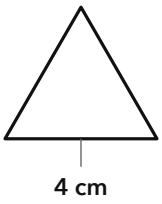


Figure 5

RIGHT **NOT RIGHT**

6.

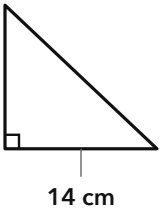


Figure 6

RIGHT **NOT RIGHT**

7.

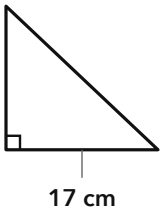


Figure 7

RIGHT **NOT RIGHT**

8.

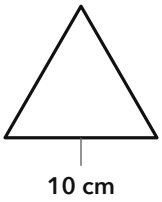


Figure 8

RIGHT **NOT RIGHT**

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 three angle measures for one new RIGHT triangle and one new NOT RIGHT triangle; each set must total 180°.

RIGHT _____

NOT RIGHT _____

CHALLENGE

Could a RIGHT triangle also have two equal sides? Explain using angle measures.

ANSWER KEY

Triangle Corner Sort

GRADE 5 · 5.GM.1

PART 1 · SORT

#	ITEM	CATEGORY	WHY
1	Figure 1 (right_triangle)	**RIGHT**	The marked angle is a right angle.
2	Figure 2 (obtuse_triangle)	**NOT RIGHT**	An obtuse triangle has an angle greater than 90° and no right angle.
3	Figure 3 (right_triangle)	**RIGHT**	The marked angle is a right angle.
4	Figure 4 (right_triangle)	**RIGHT**	The marked angle is a right angle.
5	Figure 5 (equilateral)	**NOT RIGHT**	Every angle in an equilateral triangle measures 60°.
6	Figure 6 (right_triangle)	**RIGHT**	The marked angle is a right angle.
7	Figure 7 (right_triangle)	**RIGHT**	The marked angle is a right angle.
8	Figure 8 (equilateral)	**NOT RIGHT**	Every angle in an equilateral triangle measures 60°.

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)

- **RIGHT**: 25°, 65°, 90°.
- **NOT RIGHT**: 50°, 60°, 70°.

Challenge: Yes. A triangle with angles of 45°, 45°, and 90° has a right angle and two equal sides.

For the explanations, accept answers that identify the marked 90° angle in a RIGHT figure or explain why a NOT RIGHT figure has no 90° angle. In Part 3, check that each set of angles totals 180°.