Corner Detectives

Sort triangles by their corners.

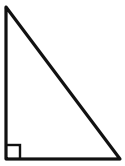
5.GM.1.1 "Describe, identify, classify, and construct triangles (equilateral, right, scalene, isosceles) by their attributes using various mathematical models."

NAME _____ DATE _____

RIGHT TRIANGLE

A right triangle has one square corner, called a right angle. A small square can mark that corner.

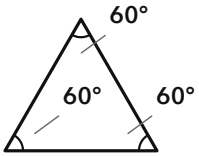
This triangle has a marked square corner.



NOT A RIGHT TRIANGLE

A triangle in this group has no square corner. Its corners may all be narrow, or one may be wide.

This triangle has three 60° corners.



1 SORT

8 items

Circle RIGHT or OTHER for each figure; in Part 2, choose one figure from each group and explain how you know where each belongs.

1.

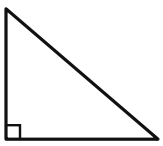


Figure 1

RIGHT OTHER

2.

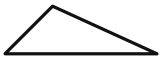


Figure 2

RIGHT OTHER

3.

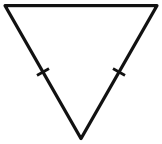


Figure 3

RIGHT **OTHER**

4.

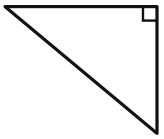


Figure 4

RIGHT **OTHER**

5.

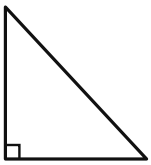


Figure 5

RIGHT **OTHER**

6.

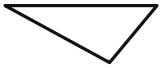


Figure 6

RIGHT **OTHER**

7.

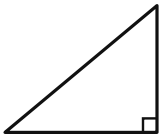


Figure 7

RIGHT **OTHER**

8.

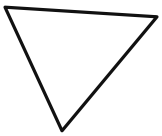


Figure 8

RIGHT **OTHER**

2 PROVE IT

Explain your thinking

Choose one figure from each group and explain how you know where each belongs.

ITEM # _____ **HOW I KNEW** _____

ITEM # _____ **HOW I KNEW** _____

3 MAKE YOUR OWN

One of each

Write one new example for RIGHT and one for OTHER. Give the angle measures for all three corners of each triangle.

RIGHT

OTHER

CHALLENGE

Can a right triangle also have two equal sides? Explain using side lengths and a right angle.

ANSWER KEY # Corner Detectives

PART 1 · SORT

#	ITEM	CATEGORY	WHY
1	Figure 1 (polygon)	**RIGHT**	The marked corner at vertex 0 is a right angle.
2	Figure 2 (polygon)	**OTHER**	The corner at vertex 2 is wide, and none of the corners is a right angle.
3	Figure 3 (polygon)	**OTHER**	All three corners are narrower than a right angle.
4	Figure 4 (polygon)	**RIGHT**	The marked corner at vertex 1 is a right angle.
5	Figure 5 (polygon)	**RIGHT**	The marked corner at vertex 0 is a right angle.
6	Figure 6 (polygon)	**OTHER**	The corner at vertex 2 is wide, and none of the corners is a right angle.
7	Figure 7 (polygon)	**RIGHT**	The marked corner at vertex 2 is a right angle.
8	Figure 8 (polygon)	**OTHER**	All three corners are narrower than a right angle.

PART 2 · PROVE IT

Task: Choose one figure from each group and explain how you know where each belongs.
Accept any explanation that names the deciding feature from the rule box for the chosen item.

PART 3 · MAKE YOUR OWN (SAMPLE ANSWERS)

- **RIGHT**: 90°, 40°, 50°.
- **OTHER**: 80°, 60°, 40°.

Challenge: Yes. Two sides that are each 4 cm long can meet at a right angle. The triangle is both right and isosceles.

For Part 2, accept explanations that identify a marked right angle or explain that a triangle has no right angle. For Part 3, each set of three angles must add to 180°.