Corner Detectives

Sort triangles by their square corners.

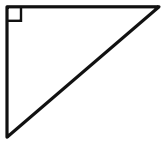
CCSS.Math.Content.4.G.A.2 "Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles."

NAME _____ DATE _____

RIGHT TRIANGLES

A right triangle has exactly one right angle. A right angle makes a square corner and measures 90°.

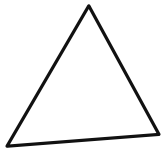
A triangle with one square corner mark.



NOT RIGHT TRIANGLES

This triangle has no right angle. None of its angles measures 90°.

A triangle whose three corners each fail to match a square paper corner.



1 SORT

8 items

Circle RIGHT or NOT RIGHT for each figure. Use a square corner of paper to check unmarked angles. Then choose two figures and explain how you know. Use a square paper corner to check an unmarked angle. A missing right-angle mark alone does not prove that the angle is not right.

1.

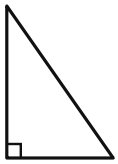


Figure 1

RIGHT **NOT RIGHT**

2.

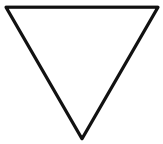


Figure 2

RIGHT **NOT RIGHT**

3.

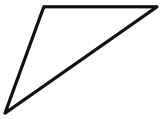


Figure 3

RIGHT **NOT RIGHT**

4.

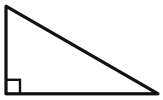


Figure 4

RIGHT **NOT RIGHT**

5.

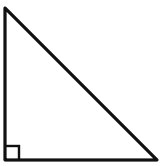


Figure 5

RIGHT **NOT RIGHT**

6.

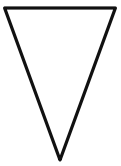


Figure 6

RIGHT **NOT RIGHT**

7.



Figure 7

RIGHT **NOT RIGHT**

8.

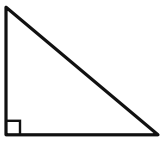


Figure 8

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 one new example of a RIGHT triangle and one new example of a NOT RIGHT triangle.

RIGHT

NOT RIGHT

CHALLENGE

Draw a right triangle on the left and mark its square corner. On the right, draw a triangle with no right angles.

ANSWER KEY

Corner Detectives

GRADE 4 · 4.G.A.2

PART 1 · SORT

#	ITEM	CATEGORY	WHY
1	Figure 1 (polygon)	**RIGHT**	It has one 90° angle, marked with a square corner.
2	Figure 2 (polygon)	**NOT RIGHT**	All three angles are acute, with no right angle.
3	Figure 3 (polygon)	**NOT RIGHT**	It has one obtuse angle and two acute angles, with no right angle.
4	Figure 4 (polygon)	**RIGHT**	It has one 90° angle, marked with a square corner.
5	Figure 5 (polygon)	**RIGHT**	It has one 90° angle, marked with a square corner.
6	Figure 6 (polygon)	**NOT RIGHT**	All three angles are acute, with no right angle.
7	Figure 7 (polygon)	**RIGHT**	It has one 90° angle, marked with a square corner.
8	Figure 8 (polygon)	**RIGHT**	It has one 90° angle, marked with a square corner.

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**: A triangle with one square corner.
- **NOT RIGHT**: A triangle with three acute angles.

Challenge: Left: a triangle with perpendicular legs and one square corner mark. Right: an equilateral triangle with three acute angles, or an obtuse triangle.

A square corner mark means 90°. For unmarked figures, accept careful comparison with a square corner of paper. A NOT RIGHT triangle may have three acute angles or one obtuse angle. Check the geometry of student drawings, not just the labels.