

Square Corner Sort

Spot right angles in shapes.

4.6 "Geometry and measurement. The student applies mathematical process standards to analyze geometric attributes in order to develop generalizations about their properties. The student is expected to: identify points, lines, line segments..."

NAME _____

DATE _____

HAS A RIGHT ANGLE

A right angle is a square corner. The two sides that meet at that corner are perpendicular.

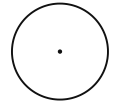
A right triangle has one right angle.



HAS NO RIGHT ANGLE

These figures have no square corners. No two sides meet to make a right angle.

A circle has no sides, so it has no right angle.



1 SORT

8 items

For each figure, circle RIGHT or NO RIGHT, then pick two figures and explain how you knew.

1.

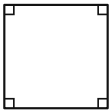


Figure 1

RIGHT

NO RIGHT

2.

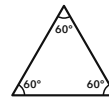


Figure 2

RIGHT

NO RIGHT

3.

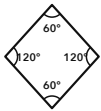


Figure 3

RIGHT

NO RIGHT

4.



Figure 4

RIGHT

NO RIGHT

5.

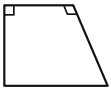


Figure 5

RIGHT

NO RIGHT

6.

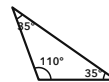


Figure 6

RIGHT

NO RIGHT

7.



Figure 7

RIGHT

NO RIGHT

8.

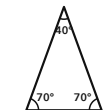


Figure 8

RIGHT

NO 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 figure in each category: one RIGHT figure and one NO RIGHT figure.

RIGHT

NO RIGHT

CHALLENGE

Name a four-sided figure that has at least one right angle and at least one pair of parallel sides.

PART 1 • SORT

#	ITEM	CATEGORY	WHY
1	Figure 1 (square)	RIGHT	A square has four right angles.
2	Figure 2 (equilateral)	NO RIGHT	All three angles are 60° , not 90° .
3	Figure 3 (rhombus)	NO RIGHT	Its angles are 60° or 120° , not 90° .
4	Figure 4 (rectangle)	RIGHT	A rectangle has four right angles.
5	Figure 5 (right trapezoid)	RIGHT	A right trapezoid has two right angles.
6	Figure 6 (obtuse triangle)	NO RIGHT	Its angles are 110° , 35° , and 35° , so none is 90° .
7	Figure 7 (parallelogram)	NO RIGHT	Its angles are 65° or 115° , not 90° .
8	Figure 8 (isosceles)	NO RIGHT	Its angles are 70° , 70° , and 40° , not 90° .

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 pentagon with one right angle.
- **NO RIGHT:** A regular octagon.

Challenge: A right trapezoid.

Key: 1 RIGHT, 2 NO RIGHT, 3 NO RIGHT, 4 RIGHT, 5 RIGHT, 6 NO RIGHT, 7 NO RIGHT, 8 NO RIGHT. For the two explanations, students should point to a square corner or state that no angle measures 90° .