

Right Angle Detectives

Sort shapes by their square corners.

CCSS.Math.Content.4.G.A "Draw and identify lines and angles, and classify shapes by properties of their lines and angles."

NAME _____

DATE _____

HAS A RIGHT ANGLE

A right angle makes a square corner and measures 90° . A shape belongs here if it has one or more right angles.

A window frame has four 90° corners.

HAS NO RIGHT ANGLE

A shape belongs here if none of its angles measures 90° . Its corners are not square corners.

A slanted four-sided figure has angles of 65° , 115° , 65° , and 115° .

1 SORT _____ 8 items

For each shape, circle RIGHT or NO RIGHT, then in PROVE IT choose two item numbers and explain how you knew.

- | | | |
|--|-----------------------------|--------------------------------|
| 1. A square | ☐ RIGHT | ☐ NO RIGHT |
| <hr/> | | |
| 2. A four-sided shape with angles 90° , 85° , 95° , and 90° | ☐ RIGHT | ☐ NO RIGHT |
| <hr/> | | |
| 3. A regular pentagon, with each angle measuring 108° | ☐ RIGHT | ☐ NO RIGHT |
| <hr/> | | |
| 4. A triangle with angles 90° , 45° , and 45° | ☐ RIGHT | ☐ NO RIGHT |
| <hr/> | | |
| 5. A parallelogram with angles 70° , 110° , 70° , and 110° | ☐ RIGHT | ☐ NO RIGHT |
| <hr/> | | |
| 6. A regular hexagon, with each angle measuring 120° | ☐ RIGHT | ☐ NO RIGHT |
| <hr/> | | |
| 7. A trapezoid with two right angles | ☐ RIGHT | ☐ NO RIGHT |
| <hr/> | | |
| 8. A four-sided shape with angles 90° , 90° , 100° , and 80° | ☐ RIGHT | ☐ NO RIGHT |
| <hr/> | | |

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 shape example for RIGHT and one new shape example for NO RIGHT.

RIGHT _____

NO RIGHT _____

CHALLENGE

Draw a four-sided shape with exactly two right angles, label all four angles, and circle its category.

PART 1 • SORT

#	ITEM	CATEGORY	WHY
1	A square	RIGHT	A square has four 90° angles.
2	A four-sided shape with angles 90° , 85° , 95° , and 90°	RIGHT	It has two 90° angles.
3	A regular pentagon, with each angle measuring 108°	NO RIGHT	None of its angles measures 90° .
4	A triangle with angles 90° , 45° , and 45°	RIGHT	It has one 90° angle.
5	A parallelogram with angles 70° , 110° , 70° , and 110°	NO RIGHT	None of its angles measures 90° .
6	A regular hexagon, with each angle measuring 120°	NO RIGHT	None of its angles measures 90° .
7	A trapezoid with two right angles	RIGHT	It has two 90° angles.
8	A four-sided shape with angles 90° , 90° , 100° , and 80°	RIGHT	It has two 90° angles.

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 four-sided shape has angles of 90° , 90° , 120° , and 60° .
- **NO RIGHT:** A four-sided shape has angles of 75° , 105° , 75° , and 105° .

Challenge: A four-sided shape with angles 90° , 90° , 110° , and 70° is **RIGHT** because it has two right angles.

For **PROVE IT**, accept explanations that name a 90° angle, a square corner, or the lack of any 90° angle. Student-created examples may vary if the angle information supports the chosen category.