

# Triangle Angle Detectives

Use angle clues to name each triangle.

**GRADE 4 • TEKS 4.6.C**

**4.6.C** "apply knowledge of right angles to identify acute, right, and obtuse triangles; and"

NAME \_\_\_\_\_

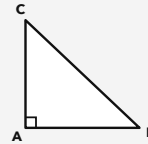
DATE \_\_\_\_\_

## ANGLE CLUES

A triangle with one  $90^\circ$  angle is a right triangle. A triangle with all angles less than  $90^\circ$  is an acute triangle. A triangle with one angle greater than  $90^\circ$  is an obtuse triangle.

## WORKED EXAMPLE

Look at the triangle. What kind of triangle is it?

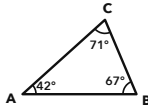


1. Find the square right-angle mark.
2. The mark shows one right angle.
3. A triangle with one right angle is a right triangle.

**Answer: right triangle**

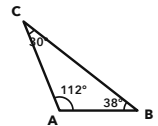
## PRACTICE 6 problems

- 1** Look at the triangle.  
What kind of triangle is it?



**ANSWER** \_\_\_\_\_

- 2** Look at the triangle.  
What kind of triangle is it?



**ANSWER** \_\_\_\_\_

- 3** A triangle has angles of  $90^\circ$ ,  $35^\circ$ , and  $55^\circ$ .  
What kind of triangle is it?

**ANSWER** \_\_\_\_\_

- 4** A triangle has angles of  $101^\circ$ ,  $44^\circ$ , and  $35^\circ$ .  
What kind of triangle is it?

**ANSWER** \_\_\_\_\_

- 5** A triangle has angles of  $48^\circ$ ,  $62^\circ$ , and  $70^\circ$ .  
What kind of triangle is it?

**ANSWER** \_\_\_\_\_

- 6** A triangle has angles of  $89^\circ$ ,  $46^\circ$ , and  $45^\circ$ .  
What kind of triangle is it?

**ANSWER** \_\_\_\_\_

## APPLY IT Show your work

- 1** Jalen makes a triangular pennant for his bike. Its angles measure  $90^\circ$ ,  $41^\circ$ , and  $49^\circ$ . What kind of triangle is the pennant?

WORK SPACE

ANSWER \_\_\_\_\_

- 2** Three students make triangular flags for a skate park. Use the table to name each flag by its angles.

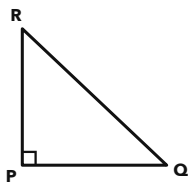
**FLAG CORNER ANGLES**

| Flag   | Angle 1     | Angle 2    | Angle 3    |
|--------|-------------|------------|------------|
| Blue   | $50^\circ$  | $60^\circ$ | $70^\circ$ |
| Green  | $90^\circ$  | $45^\circ$ | $45^\circ$ |
| Orange | $105^\circ$ | $40^\circ$ | $35^\circ$ |

ANSWER \_\_\_\_\_

## CHALLENGE One step up

Nia says, "This is an acute triangle because two corners look small." Is Nia correct? Explain your reasoning.



WORK SPACE AND ANSWER

## PART 1 • PRACTICE

| # | PROBLEM                                                                                           | ANSWER                 |
|---|---------------------------------------------------------------------------------------------------|------------------------|
| 1 | Look at the triangle. What kind of triangle is it?                                                | <b>acute triangle</b>  |
| 2 | Look at the triangle. What kind of triangle is it?                                                | <b>obtuse triangle</b> |
| 3 | A triangle has angles of $90^\circ$ , $35^\circ$ , and $55^\circ$ . What kind of triangle is it?  | <b>right triangle</b>  |
| 4 | A triangle has angles of $101^\circ$ , $44^\circ$ , and $35^\circ$ . What kind of triangle is it? | <b>obtuse triangle</b> |
| 5 | A triangle has angles of $48^\circ$ , $62^\circ$ , and $70^\circ$ . What kind of triangle is it?  | <b>acute triangle</b>  |
| 6 | A triangle has angles of $89^\circ$ , $46^\circ$ , and $45^\circ$ . What kind of triangle is it?  | <b>acute triangle</b>  |

## PART 2 • APPLY IT

1. **right triangle** The pennant has one  $90^\circ$  angle. A triangle with one right angle is a right triangle.
2. **Blue: acute triangle; Green: right triangle; Orange: obtuse triangle** Blue has all angles less than  $90^\circ$ . Green has one  $90^\circ$  angle, and Orange has one angle greater than  $90^\circ$ .

## CHALLENGE

**No. It is a right triangle because it has one right angle.**

Accept acute, right, and obtuse triangle with or without the word triangle. For the challenge, accept any explanation that identifies the marked right angle as the reason.