LESSON MAKER PRO

# Angle Detectives

*Use angle relationships to find missing measures.*

**GRADE 6 · 6.GM.3.1**

**6.GM.3.1** "Solve problems using the relationships between the angles (vertical, complementary, and supplementary) formed by intersecting lines."

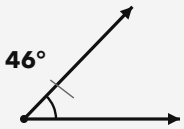
NAME _____ DATE _____

## ANGLE CLUES

Opposite angles where two lines cross are equal. Angles that make a right angle add to 90°. Angles that make a straight line add to 180°.

## WORKED EXAMPLE

The marked angle is part of a right angle. Find the other part.




1. The two parts add to 90°.
2. 90° - 46° = 44°.

**Answer: 44°**

## PRACTICE 4 problems

**1** An angle is 73°. What is its vertical angle?

**ANSWER** _____

**2** An angle is 118°. What angle makes a straight line with it?

**ANSWER** _____

**3** An angle is 27°. What angle completes a right angle with it?

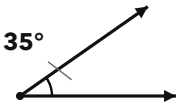
**ANSWER** _____

**4** Two angles make a straight line. They measure x° and 3x°. Find x.

**ANSWER** _____

## APPLY IT Show your work

**1** At a skate park, a painted stripe splits a right-angle corner. The marked angle is one part. What is the other part?




**ANSWER** _____

**2** Two straight sidewalk seams cross. What angle is next to the marked angle?




**ANSWER** _____

## CHALLENGE One step up

Two angles make a straight line. They measure (2x + 15)° and (x + 30)°. Find x and both angle measures.

WORK SPACE AND ANSWER

**ANSWER KEY**

# Angle Detectives

**GRADE 6 · 6.GM.3.1**

## PART 1 · PRACTICE

| # | PROBLEM | ANSWER |
|---|---|---|
| 1 | An angle is 73°. What is its vertical angle? | **73°** |
| 2 | An angle is 118°. What angle makes a straight line with it? | **62°** |
| 3 | An angle is 27°. What angle completes a right angle with it? | **63°** |
| 4 | Two angles make a straight line. They measure x° and 3x°. Find x. | **45** |

## PART 2 · APPLY IT

1. **55°** The parts of a right angle add to 90°. Subtract 35° from 90°.
2. **56°** Adjacent angles along a straight seam add to 180°. Subtract 124° from 180°.

## CHALLENGE

**x = 45; the angles are 105° and 75°.**

Accept angle measures with or without a degree symbol when the unit is clear. For the challenge, the two angle measures may be listed in either order.