

# Line Match-Up

Sort lines by how they meet or stay apart.

**MA.3.GR.1.1** "Describe and draw points, lines, line segments, rays, intersecting lines, perpendicular lines and parallel lines. Identify these in two-dimensional figures."

NAME \_\_\_\_\_

DATE \_\_\_\_\_

## PARALLEL LINES

Parallel lines stay the same distance apart. They never meet, even if the lines go on and on.

The left and right edges of a notebook cover are parallel.

## PERPENDICULAR LINES

Perpendicular lines meet to make a square corner, called a right angle. The corner looks like the corner of a sheet of paper.

Two sidewalk paths that meet at a square corner are perpendicular.

## 1 SORT \_\_\_\_\_ 8 items

Part 1: Circle PARALLEL or RIGHT for each item; Part 2: Choose two items, one from each category, and explain how you knew.

- |                                                                              |                                |                             |
|------------------------------------------------------------------------------|--------------------------------|-----------------------------|
| 1. The two rails of a train track stay the same distance apart.              | <input type="radio"/> PARALLEL | <input type="radio"/> RIGHT |
| 2. The left and right sides of a door frame.                                 | <input type="radio"/> PARALLEL | <input type="radio"/> RIGHT |
| 3. A fence post meets the ground at a square corner.                         | <input type="radio"/> PARALLEL | <input type="radio"/> RIGHT |
| 4. The top and bottom edges of a swimming pool.                              | <input type="radio"/> PARALLEL | <input type="radio"/> RIGHT |
| 5. A capital letter L has two straight strokes that meet at a square corner. | <input type="radio"/> PARALLEL | <input type="radio"/> RIGHT |
| 6. The vertical and horizontal lines on a map grid meet at square corners.   | <input type="radio"/> PARALLEL | <input type="radio"/> RIGHT |
| 7. The lane lines on a straight road.                                        | <input type="radio"/> PARALLEL | <input type="radio"/> RIGHT |
| 8. The two side rails of a straight ladder.                                  | <input type="radio"/> PARALLEL | <input type="radio"/> 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 real-world example of parallel lines and one new real-world example of perpendicular lines.

**PARALLEL**

\_\_\_\_\_

\_\_\_\_\_

**RIGHT**

\_\_\_\_\_

\_\_\_\_\_

### CHALLENGE

Draw a rectangle, label one pair of parallel sides, and mark one pair of perpendicular sides with a small square at their corner.

\_\_\_\_\_

\_\_\_\_\_

## PART 1 • SORT

| # | ITEM                                                                      | CATEGORY        | WHY                                                          |
|---|---------------------------------------------------------------------------|-----------------|--------------------------------------------------------------|
| 1 | The two rails of a train track stay the same distance apart.              | <b>PARALLEL</b> | The rails remain the same distance apart and do not meet.    |
| 2 | The left and right sides of a door frame.                                 | <b>PARALLEL</b> | These straight sides stay the same distance apart.           |
| 3 | A fence post meets the ground at a square corner.                         | <b>RIGHT</b>    | The post and ground meet at a right angle.                   |
| 4 | The top and bottom edges of a swimming pool.                              | <b>PARALLEL</b> | Opposite straight edges stay the same distance apart.        |
| 5 | A capital letter L has two straight strokes that meet at a square corner. | <b>RIGHT</b>    | The two strokes meet at a right angle.                       |
| 6 | The vertical and horizontal lines on a map grid meet at square corners.   | <b>RIGHT</b>    | A vertical and horizontal grid line meet at a right angle.   |
| 7 | The lane lines on a straight road.                                        | <b>PARALLEL</b> | The lane lines stay the same distance apart and do not meet. |
| 8 | The two side rails of a straight ladder.                                  | <b>PARALLEL</b> | The side rails stay the same distance apart.                 |

## 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)

- **PARALLEL:** Parallel lines: The two long sides of a rectangular table are parallel.
- **RIGHT:** Perpendicular lines: The vertical and horizontal strokes in a capital T are perpendicular.

**Challenge:** A rectangle with its top and bottom sides labeled parallel and a small square marked at the top-left corner, where two perpendicular sides meet.

Sort answers: 1 PARALLEL, 2 PARALLEL, 3 RIGHT, 4 PARALLEL, 5 RIGHT, 6 RIGHT, 7 PARALLEL, 8 PARALLEL. In Part 2, students should explain that parallel lines stay the same distance apart, while perpendicular lines meet at a square corner.