

# Pair It Up

Sort numbers by making two equal groups.

**2.NS.1** "The student will utilize flexible counting strategies to determine and describe quantities up to 200. Represent forward counting patterns when counting by groups of 2 up to at least 50..."

NAME \_\_\_\_\_

DATE \_\_\_\_\_

## EVEN

An even number can be split into two equal groups with no leftovers. You can show it with two equal addends.

$$24 = 12 + 12$$

## ODD

An odd number makes two equal groups with one leftover. You can show it with two equal addends plus 1.

$$31 = 15 + 15 + 1$$

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

Circle EVEN or ODD for each item, then choose two items in Prove It and tell how the equal groups or leftover helped you decide.

1. 14 counters:  $7 + 7$

EVEN

ODD

2. 32 counters:  $16 + 16$

EVEN

ODD

3. 19 counters:  $9 + 9 + 1$

EVEN

ODD

4. 28 counters:  $14 + 14$

EVEN

ODD

5. 41 counters:  $20 + 20 + 1$

EVEN

ODD

6. 7 counters:  $3 + 3 + 1$

EVEN

ODD

7. 46 counters:  $23 + 23$

EVEN

ODD

8. 25 counters:  $12 + 12 + 1$

EVEN

ODD

## 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 EVEN example and one new ODD example. Show each with an addition equation.

**EVEN** \_\_\_\_\_

\_\_\_\_\_

**ODD** \_\_\_\_\_

\_\_\_\_\_

### CHALLENGE

You have 38 cubes. Draw or describe two equal groups, write an addition equation, and tell whether 38 is even or odd.

\_\_\_\_\_

\_\_\_\_\_

## PART 1 • SORT

| # | ITEM                       | CATEGORY    | WHY                                               |
|---|----------------------------|-------------|---------------------------------------------------|
| 1 | 14 counters: $7 + 7$       | <b>EVEN</b> | Two equal groups of 7 make 14, with no leftover.  |
| 2 | 32 counters: $16 + 16$     | <b>EVEN</b> | Two equal groups of 16 make 32, with no leftover. |
| 3 | 19 counters: $9 + 9 + 1$   | <b>ODD</b>  | Two equal groups of 9 have 1 leftover.            |
| 4 | 28 counters: $14 + 14$     | <b>EVEN</b> | Two equal groups of 14 make 28, with no leftover. |
| 5 | 41 counters: $20 + 20 + 1$ | <b>ODD</b>  | Two equal groups of 20 have 1 leftover.           |
| 6 | 7 counters: $3 + 3 + 1$    | <b>ODD</b>  | Two equal groups of 3 have 1 leftover.            |
| 7 | 46 counters: $23 + 23$     | <b>EVEN</b> | Two equal groups of 23 make 46, with no leftover. |
| 8 | 25 counters: $12 + 12 + 1$ | <b>ODD</b>  | Two equal groups of 12 have 1 leftover.           |

## 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)

- **EVEN:**  $16 = 8 + 8$
- **ODD:**  $29 = 14 + 14 + 1$

**Challenge:**  $19 + 19 = 38$ , so 38 is even.

For Prove It, accept explanations that name two equal groups and no leftover for even, or two equal groups and one leftover for odd. Students may use drawings, counters, or addition equations.