

Pair Up Numbers

Sort numbers by what happens in pairs.

2.7.A “determine whether a number up to 40 is even or odd using pairings of objects to represent the number;”

NAME _____

DATE _____

EVEN NUMBER

An even number can be put into pairs with no object left alone.

12 shells: 6 pairs, no shell left alone.

ODD NUMBER

An odd number has one object left alone after you make all the pairs you can.

13 beads: 6 pairs and 1 bead left alone.

1 SORT _____ 8 items

Circle EVEN or ODD for each item, then choose two items and explain whether every object has a partner or one is left over.

1. 24 pencils: 12 pairs

EVEN

ODD

2. 8 socks: 4 pairs

EVEN

ODD

3. 19 cubes: 9 pairs and 1 left over

EVEN

ODD

4. 30 stickers: 15 pairs

EVEN

ODD

5. 11 erasers: 5 pairs and 1 left over

EVEN

ODD

6. 37 marbles: 18 pairs and 1 left over

EVEN

ODD

7. 16 books: 8 pairs

EVEN

ODD

8. 40 balloons: 20 pairs

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, using objects in pairs.

EVEN _____

ODD _____

CHALLENGE

Write two next-door numbers from 1 to 40, one even and one odd. Tell what happens when you pair each number.

PART 1 • SORT

#	ITEM	CATEGORY	WHY
1	24 pencils: 12 pairs	EVEN	All 24 pencils make pairs with none left over.
2	8 socks: 4 pairs	EVEN	All 8 socks make pairs with none left over.
3	19 cubes: 9 pairs and 1 left over	ODD	One cube is left over after making pairs.
4	30 stickers: 15 pairs	EVEN	All 30 stickers make pairs with none left over.
5	11 erasers: 5 pairs and 1 left over	ODD	One eraser is left over after making pairs.
6	37 marbles: 18 pairs and 1 left over	ODD	One marble is left over after making pairs.
7	16 books: 8 pairs	EVEN	All 16 books make pairs with none left over.
8	40 balloons: 20 pairs	EVEN	All 40 balloons make pairs with none left over.

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:** 22 acorns: 11 pairs, with none left over.
- **ODD:** 25 rocks: 12 pairs and 1 rock left over.

Challenge: 26 and 27. Twenty-six makes 13 pairs with none left over. Twenty-seven makes 13 pairs with 1 left over.

Accept any explanation that names the deciding feature from the rule box for the chosen item. Answers in order: EVEN, EVEN, ODD, EVEN, ODD, ODD, EVEN, EVEN. For Part 2, look for a correct explanation about no leftover object or one leftover object.