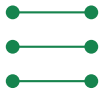
Even and Odd Numbers

An even number can be split into two equal groups with nothing left over. An odd number cannot — there is always one leftover. And here is the shortcut: only the last digit matters.

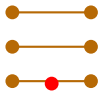
Even numbers	End in 0, 2, 4, 6, 8
Odd numbers	End in 1, 3, 5, 7, 9

Even: 6



All paired!

Odd: 7



1 left over!

Key Concepts

1. A number is **even** when you can split it into two equal groups with none left over — in other words, when 2 divides into it cleanly.

2. A number is **odd** when splitting it into two groups always leaves one behind. There is no way to fix this — an odd number simply does not pair up evenly.

3. You only need to look at the *ones* digit to decide. The thousands, hundreds, and tens places do not change whether a number is even or odd.

4. Some useful patterns: Even + Even = Even, Odd + Odd = Even, Even + Odd = Odd. Two odds combine to an even because the two "leftovers" pair up!

Worked Examples

① Is 258 even or odd?

Ignore all the digits except the very last one — the ones digit. In 258, that is the 8. Since 8 is an even digit (it ends in 0, 2, 4, 6, or 8), the whole number 258 is even.

Answer: *Even*

② Is 4,037 even or odd?

Don't be tricked by the size of the number. Look only at the ones digit: 7. Since 7 is odd, the whole number 4,037 is odd. The thousands, hundreds, and tens places never enter the picture.

Answer: *Odd*

③ Sara has 15 stickers. Can she share them equally between 2 friends with none left over?

Try the split: $15 \div 2 = 7$, with 1 left over. Because there is a leftover, 15 is *odd*. Each friend gets 7 stickers and one sticker has nowhere to go. (You could also have spotted this right away: the ones digit of 15 is 5, which is odd.)

Answer: *No — 15 is odd, so 1 sticker is left over.*

✎ Practice Problems

Write "even" or "odd" for each number.

1. Is 34 even or odd? _____
2. Is 91 even or odd? _____
3. Is 120 even or odd? _____
4. Is 567 even or odd? _____
5. Is 2,004 even or odd? _____
6. Is 3,779 even or odd? _____
7. $12 + 15 = ?$ Even or odd? _____
8. $24 + 36 = ?$ Even or odd? _____
9. $7 + 8 = ?$ Even or odd? _____
10. Is 1,000 even or odd? _____
11. $19 + 19 = ?$ Even or odd? _____
12. Is 4,856 even or odd? _____

Study Tips

- ☞ Only the **last digit** matters. 3,482 is even because its ones digit, 2, is even.
- ☞ If you forget the rule, try pairing physical objects (coins, beans, pencils). When there is nothing left over, the count is even.
- ☞ Memorize the even endings: $0, 2, 4, 6, 8$. Everything else is odd.

✍ Word Problems

1. Mrs. Lee has 28 crayons. She wants to put them in 2 equal groups. Can she do this with none left over? Explain.

Answer: _____

2. There are 153 marbles in a jar. Is the number of marbles even or odd? How do you know?

Answer: _____

Answer Key — with Friendly Explanations

Practice Problems

1. Ones digit is 4 — even.

Answer: *Even*

2. Ones digit is 1 — odd.

Answer: *Odd*

3. Ones digit is 0 — even.

Answer: *Even*

4. Ones digit is 7 — odd.

Answer: *Odd*

5. Ones digit is 4 — even.

Answer: *Even*

6. Ones digit is 9 — odd.

Answer: *Odd*

7. Even + Odd = Odd. ($12 + 15 = 27$, ones digit 7.)

Answer: 27 — *Odd*

8. Even + Even = Even. ($24 + 36 = 60$, ones digit 0.)

Answer: 60 — *Even*

9. Odd + Even = Odd. ($7 + 8 = 15$, ones digit 5.)

Answer: 15 — *Odd*

10. Ones digit is 0 — even.

Answer: *Even*

11. Odd + Odd = Even. The two "leftovers" pair up. ($19 + 19 = 38$, ones digit 8.)

Answer: 38 — *Even*

12. Ones digit is 6 — even.

Answer: *Even*

Word Problems

1. Yes. 28 ends in 8 (even), so it splits evenly. $28 \div 2 = 14$ crayons per group, no leftover.

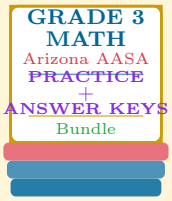
Answer: *Yes (14 + 14)*

2. Odd. The ones digit, 3, tells you that 153 cannot be split evenly into two groups.

Answer: *Odd*

Want a Complete Grade 3 Math Program?

Check Out Our Arizona AASA Grade 3 Math Bundle!



Arizona AASA Grade 3 Math Bundle

Practice tests, complete answer keys, and step-by-step explanations
Everything a third grader needs to feel ready!

Tests + Answer Keys One Bundle

Find it online:

https://www.effortlessmath.com/product/arizona-aasa-grade-3-math-made-ridiculously-simple/

Important: This bundle combines the practice and the explanations into one easy-to-print package designed for Grade 3 students. **Made for parents, teachers, and tutors who want everything in one place.**

Full Practice Tests

- ✓ Complete AASA-style practice tests
- ✓ Mirrors the real exam format and difficulty
- ✓ Builds test-taking confidence
- ✓ Aligned with state Grade 3 math standards

Start with a full-length practice test!

Step-by-Step Answer Keys

- ✓ Every question worked out, not just an answer
- ✓ Friendly, third-grade-ready explanations
- ✓ Catches and explains common misconceptions
- ✓ Parents can help even without a math background

Learn from every mistake!

Single-Skill Worksheets

- ✓ Targets one Grade 3 math skill per page
- ✓ Covers place value, multiplication, fractions, measurement, geometry
- ✓ Includes a Quick Review + Practice + Word Problems
- ✓ Built-in friendly Answer Key for self-checking

Master one skill at a time!