Rounding Calculator

Round to decimal places or powers of ten. This tool uses the explicitly stated midpoint-away-from-zero rule: -1.5 rounds to -2 at zero decimal places.

Formula: rounded = sign(x) * floor(|x| * 10^places + 0.5) / 10^places

INPUTS AND EXAMPLE VALUES

Number: 12.345

Decimal places (-12 to 12): 2

CHECK THE DEFAULT EXAMPLE

Result: 12.35

LIMITS AND CONVENTIONS

Negative places round tens, hundreds and larger units.

Decimal digits are rounded with integer arithmetic; number-valued inputs and the returned result still have binary64 precision.

METHOD AND SOURCES

https://azhanmh.com/guides/tools/rounding-calculator

OpenStax - Prealgebra 2e: numbers, fractions and percentages: https://openstax.org/books/prealgebra-2e/pages/1-introduction

Display precision is for reporting; keep unrounded values for later calculations. Verify units and conventions. This reference does not replace institution, employer or network rules.