Ratio Calculator

Reduce an integer ratio and scale both original terms by the same factor. The reduced ratio expresses relative size; scaled terms retain the chosen numerical scale.

Formula: reduced ratio = (a/gcd(a,b)) : (b/gcd(a,b)); scaled = original * scale

INPUTS AND EXAMPLE VALUES

First integer: 12

Second integer: 18

Scale factor: 1

CHECK THE DEFAULT EXAMPLE

Simplified ratio: 2:3

Scaled first term: 12

Scaled second term: 18

LIMITS AND CONVENTIONS

The ratio 0:0 is undefined; other zero or negative terms are preserved.

Decimal ratios must first be converted to equivalent integers.

METHOD AND SOURCES

https://azhanmh.com/guides/tools/ratio-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.