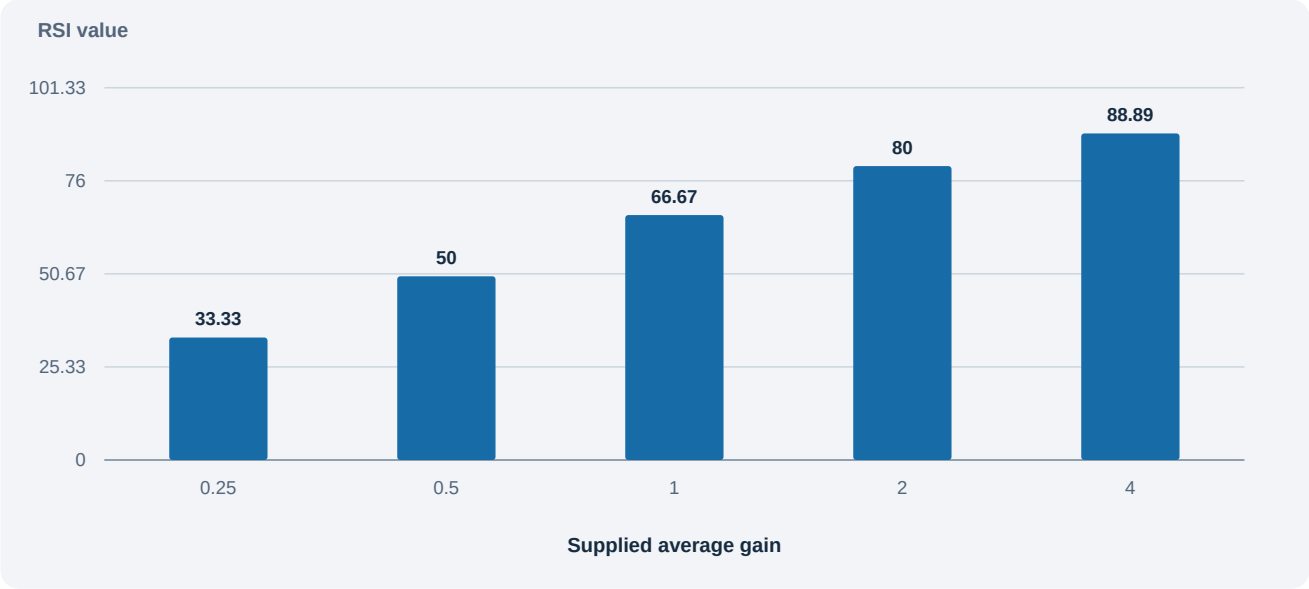
RSI from average gains and losses

Price and indicators | Original synthetic example | Edition 2026-11-26

The RSI transformation maps the ratio of smoothed average gains to smoothed average losses onto a zero-to-100 scale. This worksheet begins with supplied averages rather than choosing a smoothing implementation.

FORMULA RSI = 100 - 100 / (1 + average gain / average loss)

SCENARIO 01: Supplied smoothed average loss 0.5



WORKED EXAMPLE

Average gain 1 and average loss 0.5 transform to RSI 66.67; no threshold predicts certainty.

COMMON MISTAKE

Assuming every RSI implementation seeds its averages identically can create unexplained early differences.

BEFORE YOU USE THE CALCULATION

1. Specify the averaging method.
2. Handle zero average loss explicitly.
3. Do not treat a threshold as an assured reversal.

COMPARE TWO MORE INPUT SETS

Scenario 05: Supplied smoothed average loss 1.5. Average gain 1 and average loss 1.5 transform to RSI 40; no threshold predicts certainty.

Scenario 10: Supplied smoothed average loss 2.75. Average gain 1 and average loss 2.75 transform to RSI 26.67; no threshold predicts certainty.

Synthetic values are not historical market data. Educational material; trading can result in substantial losses.