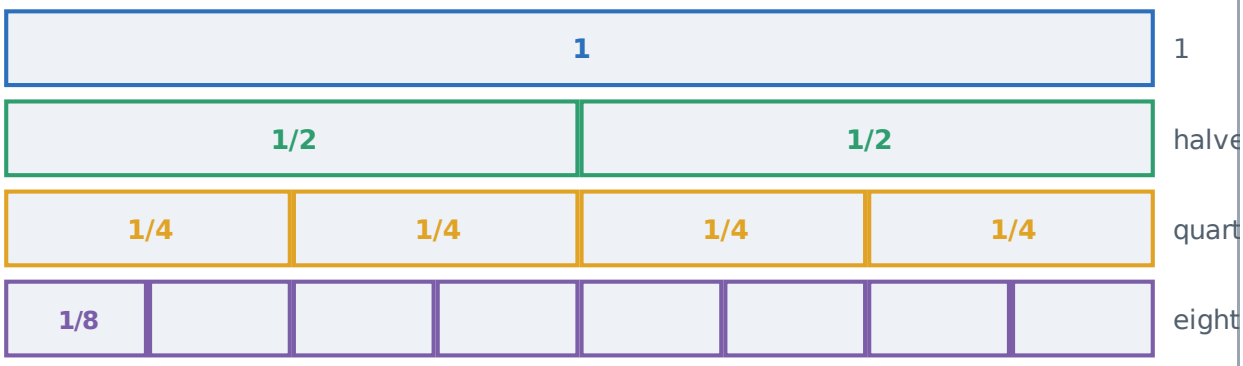
Calculating with Number — Practice Worksheet

Part A — Whole numbers, fractions & decimals

This lesson spans several calculation skills. Use **flexible, efficient strategies** rather than always reaching for the standard algorithm. For fractions with **related denominators**, rename one fraction so both match — the fraction wall shows which fractions line up.

Fraction Wall (related denominators)



1/2 = 2/4 = 4/8

Use the wall to find equivalent fractions before adding.

Worked example — related denominators. *1/2 + 1/4*: rename *1/2* as *2/4* (see the wall), then *2/4 + 1/4 = 3/4*.

Worked example — decimals. *3.40 + 1.75*: line up the points and add place by place → *5.15*.

Whole-number strategies

Q1. Use a mental strategy and name it: (a) *47 + 38* (b) *124 − 59* (c) *8 × 25* (d) *96 ÷ 4*

Q2. Show the order of operations: $6 + 3 \times (10 - 4)$.

Fractions with related denominators

Q3. Use the fraction wall to rename first, then add or subtract:

(a) $1/2 + 1/4$ (b) $3/4 - 1/8$ (c) $2/3 + 1/6$

Decimals to 2 dp

Q4. (a) $3.40 + 1.75$ (b) $6.20 - 2.85$ (c) $0.9 + 0.45$

Part B — Decimals, percentages of a quantity & estimation

When we multiply or divide by powers of 10, the **digits shift** place value — they do not just "gain a zero". **Estimation** and rounding let us check whether an answer is reasonable before trusting it.

> **Worked example — percentage of a quantity.** 25% of 40 $= 1/4 \times 40 = 10$. Estimate-check: a quarter of 40 is 10 — reasonable. ✓

> **Watch out.** 3.7×10 is **37**, not 3.70. Multiplying by 10 moves every digit one place to the left.

Multiplying decimals & powers of 10

Q1. (a) 0.6×4 (b) 1.25×3 (c) 3.7×10 (d) $45.0 \div 10$ (e) $2.5 \div 100$

Fraction / decimal / percentage of a quantity

Q2. Find: (a) $\frac{1}{4}$ of 60 (b) 0.5 of 18 (c) 10% of 250 (d) 25% of 40 (e) 50% of 92

Estimation & rounding

Q3. Estimate first (round sensibly), then calculate and compare:

(a) $297 + 412$ (b) 19×21 (c) 6.1×4.9

Q4. A shirt costs $\$24.95$. Estimate the cost of 3 shirts, then find the exact total.

Reasoning

Q5. Maya says $3.7 \times 10 = 3.70$. Is she right? Explain what really happens to the digits.