

Lesson 37 **NUMBER**

Adding and subtracting fractions with different denominators

MODEL THIS ON THE BOARD

 $1/2 + 1/3$ (DIFFERENT DENOMINATORS)

- 1 Find a **common denominator** — a number both 2 and 3 divide into. **6** works.
- 2 Rewrite each fraction with denominator 6: $1/2 = 3/6$, $1/3 = 2/6$.
- 3 Now add: $3/6 + 2/6 = 5/6$.

ANSWER KEY

a) $1/2 = 3/6$; $1/3 = 2/6$; $3/6 + 2/6 = 5/6$.b) $3/4 = 9/12$; $1/3 = 4/12$; $9/12 - 4/12 = 5/12$.Q1: $13/10$ Q2: $17/30$ a) **Always** — Divide top by bottom — the answer is the decimal twin (sometimes recurring).b) **Never** — $1 \div 3 = 0.333...$ It never ends — it recurs.c) **Always** — Three ways of writing the same magnitude.d) **Never** — $1/2 = 0.5$ but $1/10 = 0.1$ — bigger denominator means smaller decimal (when numerators match).e) **Always** — $1 \div 4 = 0.25 = 25\%$.f) **Never** — $1/2$, $2/4$, $5/10$ are all 0.5 — equivalent fractions share the decimal.

EXTENSION SHEET · STRETCH ANSWERS

S1: $13/28$ S2: $27/20$ S3: $13/10$