

Linking simple fractions and decimals

WHAT THIS LESSON TEACHES

A fraction and a decimal can be two names for exactly the same amount. On a strip split into ten or a hundred equal parts, the shaded fraction reads off as its matching decimal.

→ one half = 0.5 (5 of 10 parts shaded)

→ one quarter = 0.25 (25 of 100 parts shaded)

MODEL THIS ON THE BOARD

NAMING THREE TENTHS AS A DECIMAL

- 1 The strip is split into **10** equal parts.
- 2 Three parts are shaded, so the fraction is **3/10**.
- 3 Three tenths is the same as the decimal **0.3**.



DISCUSSION STARTER

REFLECT Which fraction-decimal twin do you find easiest to remember, and why?

ANSWER KEY

- a) $\frac{1}{2}$
 b) $\frac{3}{10}$
 c) $\frac{1}{4}$

Q1: 0.75

Q2: 0.7

Q3: 0.7

Q4: 0.8

a) **Always** — Five of ten equal parts shaded reads out as $\frac{1}{2}$ and as 0.5.

b) **Always** — A quarter shades 25 of 100 parts, which is 0.25.

c) **Always** — Three of ten equal parts shaded reads as $\frac{3}{10}$ and 0.3.

d) **Always** — They are two names for one amount, so the shaded length is equal.

EXTENSION SHEET · STRETCH ANSWERS

S1: $4.58 = 4 + 0.5 + 0.08$

S2: $\frac{21}{24} = \frac{7}{8}$

S3: $\frac{36}{40} = \frac{9}{10}$

S4: $3.47 = 3 + 0.4 + 0.07$

S5: $2.34 = 2 + 0.3 + 0.04$

Investigation: Fraction-decimal twins — open-ended; scan pupils' working for valid solution paths rather than a single answer.