

Fractions on a number line

CURRICULUM ALIGNMENT

NUM.FRC.3a compare and express in equivalent terms; and order fractions.

INTERACTIVES Number Line · challenge, display, explore

WHAT THIS LESSON TEACHES

A fraction can be shown as a point on the line between 0 and 1, at an equal jump along from 0.

→ One half sits exactly in the middle of a 0-to-1 line.

→ For quarters, split the line into four equal steps; three quarters is three jumps from 0.

MODEL THIS ON THE BOARD

PLACING FRACTIONS ON THE LINE

- 1 Draw a line from 0 to 1 and split it into four equal jumps.
- 2 Count one jump from 0 to mark **one quarter**.
- 3 Count two jumps from 0 to mark **one half**.
- 4 Count three jumps from 0 to mark **three quarters**.

ANSWER KEY

Scaffold: visual check on the page

Q1: halfway / at $1/2$

Q2: at $1/4$

Q3: at $3/4$

Q4: Yes

a) Always : Half is exactly midway when the line is split into two equal parts.

b) Always : Three quarters sits nearer 1 than 0 on the line.

c) Sometimes : True for $2/4$ and $1/2$; false for $1/4$ and $3/4$.

d) Never : Some fractions like equivalents share the same point.

EXTENSION SHEET · STRETCH ANSWERS

S1: $1/5 < 3/4 < 7/8 < 11/12$

S2: $1/5 < 3/4 < 7/8$

S3: $2/5 < 7/10 < 9/10$

Investigation: Jumps on the fraction line — open-ended; scan pupils' working for valid solution paths rather than a single answer.