

End-of-module challenge: what's my number?

CURRICULUM ALIGNMENT

NUM.PVT.4

investigate how decimals and percentages (and fractions) can be compared, ordered and expressed in related terms.

INTERACTIVES Place Value Blocks (Dienes) · challenge, display, explore

WHAT THIS LESSON TEACHES

A clue can name the exact digit that sits in one place-value column of a decimal number. You write that digit on the mat and keep only the candidates that still fit every clue.

→ 'I have three tenths' fixes the tenths digit as 3, giving 0.3 so far.

→ 'My hundredths digit is even' rules out 0.43 but keeps 0.42.

MODEL THIS ON THE BOARD

MYSTERY PLAYGROUND SCORE

- 1 Sketch a place-value mat with units, tenths, hundredths and thousandths columns.
- 2 Clue: I have three tenths. Write **3** in the tenths column. Number so far: 0.3??
- 3 Clue: I have seven hundredths. Write **7** in the hundredths column. Number so far: 0.37?
- 4 Clue: My thousandths digit is 5. Write **5** in the thousandths column.
- 5 The mystery number that fits all three clues is 0.375.

ANSWER KEY

Scaffold: visual check on the page**Q1:** 0.96**Q2:** 0.60**Q3:** 0.18**Q4:** 0.342**Q5:** 0.196

a) **Always** : That clue names the tenths place exactly, so the digit must be 4.

b) **Always** : The even digits 0, 2, 4, 6 and 8 all still fit, so one clue alone cannot choose between them.

c) **Never** : The same clues always point to the same number no matter the order they are read.

d) **Never** : One clue usually fills only one column and leaves the other columns open.

EXTENSION SHEET · STRETCH ANSWERS

S1: €5.75 (write both as cent: 40 cent vs 575 cent)**S2:** €4.20 (write both as cent: 420 cent vs 414 cent)**S3:** €1.75 (write both as cent: 130 cent vs 175 cent)**S4:** €4.80 (write both as cent: 460 cent vs 480 cent)**S5:** €5.40 (write both as cent: 540 cent vs 529 cent)