

Lesson 17 **NUMBER****Multiplying decimals by whole numbers**

CURRICULUM ALIGNMENT

NUM.OPS.4

build upon, select and make use of a range of operation strategies.

NUM.PVT.4

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

INTERACTIVES

Area Model · display, explore

Target Number · challenge

WHAT THIS LESSON TEACHES

When multiplying a decimal by a whole number, ignore the decimal point and multiply as whole numbers, then put the decimal point back counting the places from the original decimal.

→ For 0.6×4 , whole-number core is $6 \times 4 = 24$, then 24 becomes 2.4.

→ For 1.25×3 , whole-number core is $125 \times 3 = 375$, then 375 becomes 3.75.

MODEL THIS ON THE BOARD

WORK OUT 0.6×4

- 1 Multiply the whole-number core: $6 \times 4 = 24$.
- 2 Count the decimal places in 0.6 (one place).
- 3 Move the point one place left in 24 to get **2.4**.

ANSWER KEY

Scaffold: visual check on the page

Q1: €0.75

Q2: €4.80

Q3: €5.60

Q4: €3.75

a) **Always** — Any positive decimal times a whole number over 1 grows the amount.

b) **Always** — We count the places from the original decimal and move the point that many times.

c) **Sometimes** — It depends if there are trailing zeros after moving the point.

d) **Never** — Estimates are close but not exact unless the numbers allow it.

EXTENSION SHEET · STRETCH ANSWERS

S1: 2975

S2: 2813

S3: 2001

S4: 352.5

S5: 182.7