Lesson 41 NUMBER

Equivalent ratios and simplifying ratios

WHAT THIS LESSON TEACHES

Two ratios that describe the same comparison, made by multiplying or dividing both parts by the same number

→ 2:3 is the same comparison as 4:6 and 6:9 - each part has been multiplied by the same amount
→ 10:15 divides by 5 on both parts to give 2:3, which cannot go any smaller

MODEL THIS ON THE BOARD

SIMPLIFY A RATIO USING BAR MODELS

1. Draw bars for 24 apples to 18 oranges
2. Divide both parts by 6 to get 4:3
3. Check the bars show the same relative lengths

ANSWER KEY

Scaffold: visual check on the page

Q1: 7:11

Q2: 13:17

Q3: 7:13

Q4: 4:10, 6:15, 8:20

Q5: 2:8, 3:12

a) Always — Both parts divided by the same number keeps the comparison the same.

b) Always — Dividing both by 2 gives the same simplified ratio.

c) Never — Both parts must be multiplied or divided by the same number.

d) Always — Multiplying both parts by 2 gives the same comparison.

EXTENSION SHEET · STRETCH ANSWERS

S1: 16

S2: 20 + 50

S3: 10

S4: 8

S5: 5 + 10 + 20