Simplest form: answers

Practised: simplifying (cancelling) fractions by dividing by a common factor, and writing them in simplest form (Year 6).

Page 1 · Warm up

4 and 10: **2** · 9 and 12: **3** · 10 and 15: **5** · 8 and 24: **8**

Page 2 · Try it together

2 covered: $\frac{6}{8} = \frac{3}{4}$ (÷ 2)
4 covered: $\frac{4}{8} = \frac{1}{2}$ (÷ 4)
6 covered: $\frac{2}{8} = \frac{1}{4}$ (÷ 2)

Page 2 · A. Match

$\frac{4}{6} \to \frac{2}{3}$ · $\frac{5}{10} \to \frac{1}{2}$
$\frac{6}{8} \to \frac{3}{4}$ · $\frac{4}{20} \to \frac{1}{5}$

Page 3 · B. Simplify

$\frac{9}{12} = \frac{3}{4}$ (÷ 3) · $\frac{10}{16} = \frac{5}{8}$ (÷ 2)
$\frac{15}{20} = \frac{3}{4}$ (÷ 5) · $\frac{14}{35} = \frac{2}{5}$ (÷ 7)
$\frac{18}{24} = \frac{3}{4}$ (÷ 6) · $\frac{24}{40} = \frac{3}{5}$ (÷ 8)

Page 3 · C. Already simplest

$\frac{3}{8}$, $\frac{5}{9}$, $\frac{7}{12}$ (not $\frac{4}{10} = \frac{2}{5}$, $\frac{6}{15} = \frac{2}{5}$, $\frac{9}{21} = \frac{3}{7}$)

Page 3 · D. Missing numbers

$\frac{12}{30} = \frac{2}{5}$ · $\frac{21}{28} = \frac{3}{4}$ · $\frac{15}{45} = \frac{1}{3}$

Challenge: No. Taking away changes the size: $\frac{2}{6}$ is only a third, but $\frac{8}{12}$ is two thirds. Divide instead: the HCF of 8 and 12 is 4, so $\frac{8}{12} = \frac{2}{3}$.

Watch out for

- **Dividing only the top or only the bottom.** Say "what I do to the top, I do to the bottom".
- **Stopping too soon** ($\frac{16}{24} \to \frac{8}{12}$). Ask "Is there still a number that divides into both?" Keep going to $\frac{2}{3}$.
- **Taking away instead of dividing.** It changes the amount. Shade both fractions on a bar to show they don't match.

Going further (5 minutes, no paper)

- **Snack fractions:** "There were 8 slices and we've eaten 2. What fraction is left, in its simplest form?" ($\frac{3}{4}$.)
- **Cancel it:** say a fraction like "ten twelfths"; your child says the simplest form (five sixths).
- **In the game:** Chapter 2 uses common multiples to give fractions the same denominator.