Lesson 4: Equivalent fractions (2)

➜ pages 80–82

1. a) $\frac{1}{2} = \frac{3}{6}$

b) 8 sections of right-hand diagram shaded; $\frac{4}{5} = \frac{8}{10}$

c) 2 sections of right-hand diagram shaded; $\frac{1}{4} = \frac{2}{8}$

d) Answers will vary but fractions should be equivalent to $\frac{2}{3}$; $\frac{10}{15} = \frac{2}{3}$

2. a) $\frac{1}{2} = \frac{4}{8}$

b) $\frac{3}{4} = \frac{15}{20}$

c) $\frac{3}{5} = \frac{9}{15}$

d) $\frac{1}{6} = \frac{4}{24}$

e) $\frac{2}{7} = \frac{6}{21}$

f) Answers will vary but fractions should be equivalent to $\frac{5}{6}$.

3. Lines drawn to connect equivalent fractions: $\frac{1}{5} = \frac{4}{20}$

$\frac{2}{3} = \frac{4}{6}$

$\frac{10}{20} = \frac{1}{2}$

$\frac{5}{6} = \frac{10}{12}$

$\frac{2}{9} = \frac{6}{27}$

$\frac{11}{12} = \frac{55}{60}$

4. a) Answers will vary but left-hand numerator should be 9 × right-hand numerator each time; for example:
$\frac{9}{45} = \frac{1}{5}$, $\frac{18}{45} = \frac{2}{5}$, $\frac{27}{45} = \frac{3}{5}$

b) Answers will vary but right-hand denominator should be 3 × left-hand denominator each time; for example:
$\frac{6}{8} = \frac{18}{24}$, $\frac{6}{9} = \frac{18}{27}$, $\frac{6}{10} = \frac{18}{30}$

5. a) Answers will vary; for example: $\frac{5}{6} = \frac{10}{12} = \frac{15}{18} = \frac{20}{24}$

b) Answers will vary; for example: $\frac{10}{10} = \frac{20}{20} = \frac{30}{30} = \frac{40}{40}$

c) Answers will vary; for example: $\frac{1}{8} = \frac{2}{16} = \frac{3}{24} = \frac{4}{32}$

6. Explanations will vary; for example:
12 and 20 are both divisible by 4 so $\frac{12}{20} = \frac{3}{5}$. Multiplying both the numerator and the denominator by 3 gives $\frac{9}{15}$. So $\frac{12}{20} = \frac{9}{15}$, i.e. they are equivalent.

Reflect

Methods will vary; for example:
Multiplying the numerator and denominator by the same number will give equivalent fractions or you can use a fraction wall to find fractions that line up.