



Math worksheet on 'Factoring - Simplifying Fraction Multiplication with Factors - Composite to Factored (Level 1)'. Part of a broader unit on 'Factoring, Multiplication, Division, Fractions - Advanced'

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**1** Use factorization to simplify by showing what factors in this fraction multiplication can be cancelled out

$$\frac{14}{42} \times \frac{10}{5}$$

**a**  $\frac{7 \times 7}{2 \times 7} \times \frac{2 \times 5}{5}$

**b**  $\frac{2 \times 7}{3 \times 7} \times \frac{7 \times 5}{5}$

**c**  $\frac{2 \times 7}{2 \times 3 \times 7} \times \frac{2 \times 5}{5}$

**d**  $\frac{7}{3 \times 7 \times 7} \times \frac{2 \times 5}{5}$

**e**  $\frac{2}{2 \times 3 \times 7} \times \frac{2 \times 5}{5}$

**f**  $\frac{2 \times 7}{2 \times 3 \times 3 \times 13} \times \frac{2 \times 5}{5}$

**2** Use factorization to simplify by showing what factors in this fraction multiplication can be cancelled out

$$\frac{7}{98} \times \frac{20}{2}$$

**a**  $\frac{7}{2 \times 7 \times 7} \times \frac{2 \times 5}{2}$

**b**  $\frac{7}{2 \times 7 \times 7} \times \frac{2 \times 2 \times 5}{2}$

**c**  $\frac{7}{7 \times 7 \times 7} \times \frac{2 \times 2 \times 5}{2}$

**d**  $\frac{7}{2 \times 7 \times 5} \times \frac{2 \times 11 \times 5}{2}$

**e**  $\frac{13}{2 \times 2 \times 7} \times \frac{2 \times 2 \times 2 \times 5}{2}$

**f**  $\frac{7 \times 7}{2 \times 7 \times 7} \times \frac{2 \times 2 \times 2 \times 2 \times 5}{2}$

**3** Use factorization to simplify by showing what factors in this fraction multiplication can be cancelled out

$$\frac{49}{7} \times \frac{14}{70}$$

**a**  $\frac{5 \times 7}{3} \times \frac{2 \times 11}{2 \times 5 \times 5 \times 7}$

**b**  $\frac{7 \times 7}{7} \times \frac{2}{2 \times 5 \times 3}$

**c**  $\frac{7 \times 7}{7} \times \frac{7}{2 \times 5 \times 7}$

**d**  $\frac{7 \times 7}{7} \times \frac{2 \times 7 \times 7}{2 \times 5 \times 7 \times 7}$

**e**  $\frac{7 \times 7}{7} \times \frac{2 \times 7}{2 \times 5 \times 7}$

**f**  $\frac{11 \times 7 \times 7}{7} \times \frac{2 \times 7}{2 \times 5 \times 5}$

**4** Use factorization to simplify by showing what factors in this fraction multiplication can be cancelled out

$$\frac{10}{14} \times \frac{6}{15}$$

**a**  $\frac{2}{2 \times 7} \times \frac{2 \times 3}{7 \times 5}$

**b**  $\frac{2 \times 5 \times 5}{2 \times 7 \times 7} \times \frac{2 \times 2 \times 3}{3 \times 5}$

**c**  $\frac{2 \times 5}{2} \times \frac{3}{5}$

**d**  $\frac{2 \times 2 \times 5}{5 \times 7} \times \frac{2 \times 3}{3 \times 5}$

**e**  $\frac{2 \times 5}{2 \times 7} \times \frac{2 \times 3}{3 \times 5}$

**f**  $\frac{2 \times 5}{2 \times 7} \times \frac{2 \times 3}{3 \times 5 \times 5}$

**5** Use factorization to simplify by showing what factors in this fraction multiplication can be cancelled out

$$\frac{6}{5} \times \frac{15}{30}$$

**a**  $\frac{2 \times 7}{5} \times \frac{3 \times 3 \times 5}{2 \times 3 \times 5}$

**b**  $\frac{13 \times 3 \times 3}{5} \times \frac{3 \times 3 \times 5}{2 \times 3 \times 5}$

**c**  $\frac{2 \times 3}{5} \times \frac{3 \times 5}{2 \times 3 \times 5}$

**d**  $\frac{13 \times 3}{5} \times \frac{3 \times 5}{2 \times 3 \times 5}$

**e**  $\frac{2 \times 3}{5} \times \frac{3 \times 3 \times 5}{2 \times 5}$

**f**  $\frac{2 \times 3}{5} \times \frac{3 \times 5}{2 \times 3}$

**6** Use factorization to simplify by showing what factors in this fraction multiplication can be cancelled out

$$\frac{3}{6} \times \frac{20}{25}$$

**a**  $\frac{3}{2 \times 3} \times \frac{2 \times 5}{7 \times 5}$

**b**  $\frac{3}{2 \times 3} \times \frac{2 \times 2 \times 5}{5 \times 5}$

**c**  $\frac{3 \times 3}{2 \times 3} \times \frac{2 \times 2 \times 5 \times 5}{5}$

**d**  $\frac{3 \times 3}{2 \times 3} \times \frac{2 \times 2 \times 5}{5}$

**e**  $\frac{11}{2 \times 3} \times \frac{2 \times 5 \times 5}{5 \times 5}$

**f**  $\frac{3}{2 \times 3} \times \frac{2 \times 5}{5 \times 5}$

**7** Use factorization to simplify by showing what factors in this fraction multiplication can be cancelled out

$$\frac{3}{42} \times \frac{12}{2}$$

**a**  $\frac{3}{2 \times 3 \times 7} \times \frac{2 \times 2 \times 2}{2}$

**b**  $\frac{3}{2 \times 5 \times 7} \times \frac{2 \times 2 \times 3}{2}$

**c**  $\frac{11}{2 \times 3 \times 7} \times \frac{2 \times 2 \times 2 \times 3}{2}$

**d**  $\frac{2}{2 \times 3 \times 7} \times \frac{2 \times 2}{2}$

**e**  $\frac{3}{2 \times 3 \times 7} \times \frac{2 \times 2 \times 3}{2}$

**f**  $\frac{5}{2 \times 3 \times 3 \times 7} \times \frac{2 \times 11}{2}$