

Maths Mastery

Simplify Fractions and
Common Denominators

Answers



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1. The common factors of 24 and 30 are 1, 2, 3 and 6. Take the highest factor which is 6.

Divide 24 and 30 by 6.

$$\frac{24}{30} = \frac{4}{5}$$

$\frac{4}{5}$ is the simplest form.

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2. Simplify these fractions into the simplest form, write the highest common factor with your answer:

$$\frac{7}{12} (2) \quad \frac{7}{10} (3) \quad \frac{5}{8} (5) \quad \frac{4}{7} (4)$$

$$\frac{3}{8} (8) \quad \frac{4}{9} (9) \quad \frac{3}{11} (12)$$



Write some for a partner.



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3. Using your own example explain how to use common multiples to express two fractions with different denominators as ones with the same denominator.

Take 2 fractions: $\frac{1}{4}$ and $\frac{2}{5}$.

Find the common multiples of the denominators 4 and 5; 20, 40, 60 ...

Take the lowest common multiple, 20.

Express the fractions with the denominator 20 by multiplying the numerator and denominator of each fraction by the same number, so the denominator becomes 20.

$$\frac{1}{4} \begin{array}{l} \xrightarrow{\times 5} \\ \xrightarrow{\times 5} \end{array} \frac{5}{20}$$

$$\frac{2}{5} \begin{array}{l} \xrightarrow{\times 4} \\ \xrightarrow{\times 4} \end{array} \frac{8}{20}$$

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4. Express the following pairs of fractions with the same denominator.

$$\frac{24}{30} \text{ and } \frac{6}{30}$$

$$\frac{9}{24} \text{ and } \frac{16}{24}$$

$$\frac{14}{20} \text{ and } \frac{15}{20}$$

$$\frac{24}{60} \text{ and } \frac{55}{60}$$

$$\frac{15}{60} \text{ and } \frac{16}{60}$$

$$\frac{27}{90} \text{ and } \frac{35}{90}$$

Write some of your own pairs for a partner to express with the same denominator.