

Varied Fluency

Step 1: Simplify Fractions

National Curriculum Objectives:

Mathematics Year 6: (6F2) [Use common factors to simplify fractions; use common multiples to express fractions in the same denomination](#)

Differentiation:

Developing Questions to support simplifying fractions using denominators which are multiples of the numerator. Bar models or fraction walls used in every question.

Expected Questions to support simplifying fractions using highest common factors of the numerator and denominator. Involving multiples of any number up to 12 x 12. Some pictorial support given.

Greater Depth Questions to support simplifying fractions using highest common factors of the numerator and denominator. Involving multiples of numbers up to 12 x 12 and introducing multiples of 20 and 25. No pictorial support.

More [Year 6 Fractions](#) resources.

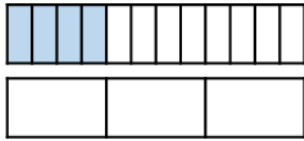
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Simplify Fractions

Simplify Fractions

1a. Simplify this fraction using the bar model.

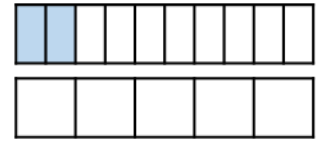
$$\frac{4}{12} = \frac{\square}{\square}$$



VF

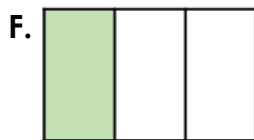
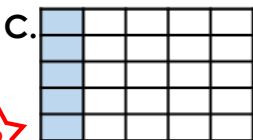
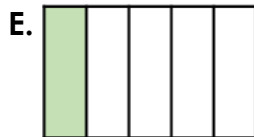
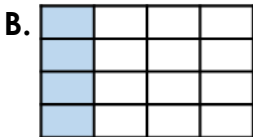
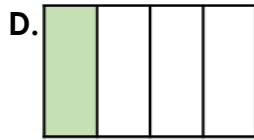
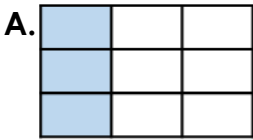
1b. Simplify this fraction using the bar model.

$$\frac{2}{10} = \frac{\square}{\square}$$



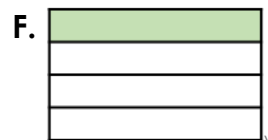
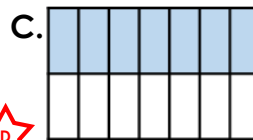
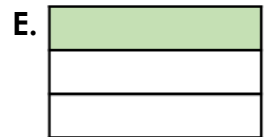
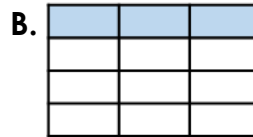
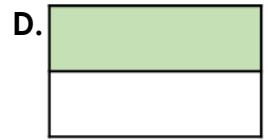
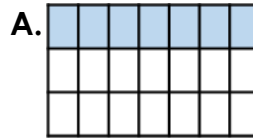
VF

2a. Match each fraction to its simplified version.



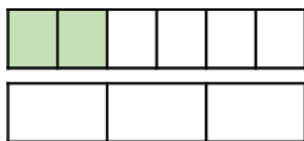
VF

2b. Match each fraction to its simplified version.



VF

3a. True or false? The following fraction is reduced to its simplest form.

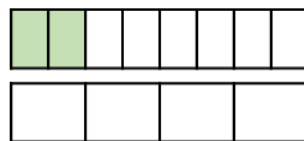


$$\frac{2}{6} = \frac{1}{3}$$



VF

3b. True or false? The following fraction is reduced to its simplest form.

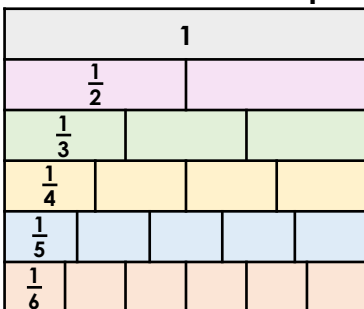


$$\frac{2}{8} = \frac{1}{2}$$



VF

4a. Use the fraction wall to circle any fraction shown in its simplest form.



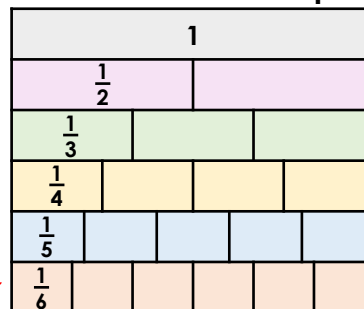
$$\frac{2}{5} \quad \frac{2}{6}$$

$$\frac{2}{4} \quad \frac{2}{3}$$



VF

4b. Use the fraction wall to circle any fraction shown in its simplest form.



$$\frac{2}{4} \quad \frac{3}{4}$$

$$\frac{3}{5} \quad \frac{3}{6}$$



VF

Simplify Fractions

5a. Simplify these fractions using the highest common factor.

A. $\frac{24}{42} (\div 6) = \frac{\square}{\square}$

B. $\frac{20}{28} (\div 4) = \frac{\square}{\square}$



VF

Simplify Fractions

5b. Simplify these fractions using the highest common factor.

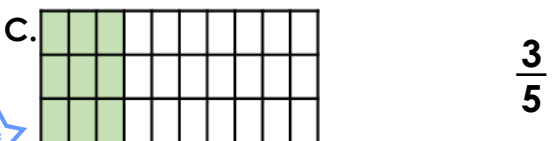
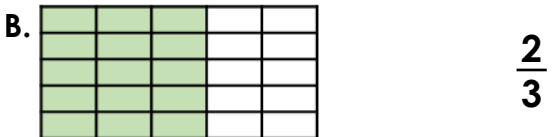
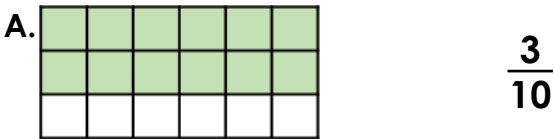
A. $\frac{21}{28} (\div 7) = \frac{\square}{\square}$

B. $\frac{24}{30} (\div 6) = \frac{\square}{\square}$



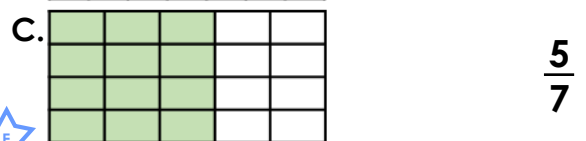
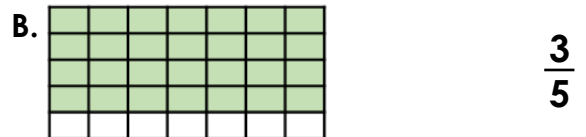
VF

6a. Match each fraction to its simplified version.



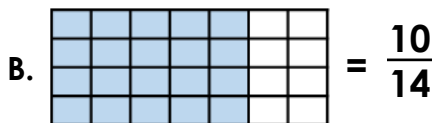
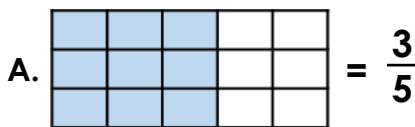
VF

6b. Match each fraction to its simplified version.



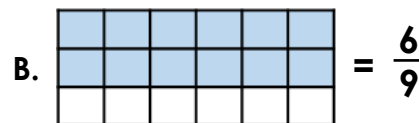
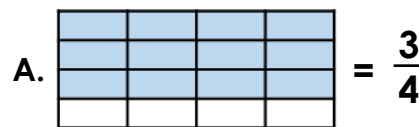
VF

7a. True or false? The following fractions are reduced to their simplest forms.



VF

7b. True or false? The following fractions are reduced to their simplest forms.



VF

8a. Circle the fractions shown in their simplest form.

$\frac{3}{18}$

$\frac{8}{24}$

$\frac{31}{36}$

$\frac{6}{24}$

$\frac{7}{36}$



VF

8b. Circle the fractions shown in their simplest form.

$\frac{21}{28}$

$\frac{11}{14}$

$\frac{7}{15}$

$\frac{9}{12}$

$\frac{13}{20}$



VF

Simplify Fractions

Simplify Fractions

9a. Find the highest common factor to simplify the fractions below.

A. $\frac{35}{42} (\div \square) = \frac{\square}{\square}$

B. $\frac{24}{36} (\div \square) = \frac{\square}{\square}$



VF

9b. Find the highest common factor to simplify the fractions below.

A. $\frac{48}{60} (\div \square) = \frac{\square}{\square}$

B. $\frac{36}{80} (\div \square) = \frac{\square}{\square}$



VF

10a. Match each fraction to its simplified version.

A. $\frac{18}{50}$ $\frac{5}{12}$

B. $\frac{26}{40}$ $\frac{9}{25}$

C. $\frac{40}{96}$ $\frac{13}{20}$



VF

10b. Match each fraction to its simplified version.

A. $\frac{84}{96}$ $\frac{9}{25}$

B. $\frac{36}{42}$ $\frac{7}{8}$

C. $\frac{27}{75}$ $\frac{6}{7}$



VF

11a. True or false? The following fractions are reduced to their simplest forms.

A. 49 tulips out of 63 are red. This is $\frac{7}{8}$ when expressed as a fraction.

B. 33 children out of 75 are left handed. This is $\frac{11}{25}$ when expressed as a fraction.



VF

11b. True or false? The following fractions are reduced to their simplest forms.

A. 35 dogs out of 100 are brown. This is $\frac{7}{20}$ when expressed as a fraction.

B. Toby scored 32 out of 72 in a test. When expressed as a fraction, this is $\frac{2}{9}$.



VF

12a. Circle the fractions shown in their simplest form.

$\frac{9}{24}$

$\frac{17}{20}$

$\frac{3}{15}$

$\frac{5}{17}$

$\frac{12}{33}$



VF

12b. Circle the fractions shown in their simplest form.

$\frac{13}{50}$

$\frac{32}{40}$

$\frac{3}{15}$

$\frac{10}{14}$

$\frac{19}{75}$



VF

Varied Fluency Simplify Fractions

Developing

1a. $\frac{1}{3}$

2a. A and F; B and D; C and E

3a. True

4a. $\frac{2}{5}$; $\frac{2}{3}$

Expected

5a. A: $\frac{4}{7}$; B: $\frac{5}{7}$

6a. A: $\frac{2}{3}$; B: $\frac{3}{5}$; C: $\frac{3}{10}$

7a. A: True; B: False, it should be $\frac{5}{7}$

8a. $\frac{31}{36}$; $\frac{7}{36}$

Greater Depth

9a. A: $\frac{5}{6}$ (HCF 7); B: $\frac{2}{3}$ (HCF 12)

10a. A: $\frac{9}{25}$; B: $\frac{13}{20}$; C: $\frac{5}{12}$

11a. A: False, it should be $\frac{7}{9}$; B: True

12a. $\frac{17}{20}$; $\frac{5}{17}$

Varied Fluency Simplify Fractions

Developing

1b. $\frac{1}{5}$

2b. A and E; B and F; C and D

3b. False ($\frac{1}{4}$)

4b. $\frac{3}{4}$; $\frac{3}{5}$

Expected

5b. A: $\frac{3}{4}$; B: $\frac{4}{5}$

6b. A: $\frac{5}{7}$; B: $\frac{4}{5}$; C: $\frac{3}{5}$

7b. A: True; B: False, it should be $\frac{2}{3}$

8a. $\frac{11}{14}$; $\frac{13}{20}$; $\frac{7}{15}$

Greater Depth

9b. A: $\frac{4}{5}$ (HCF 12); B: $\frac{9}{20}$ (HCF 4)

10b. A: $\frac{7}{8}$; B: $\frac{6}{7}$; C: $\frac{9}{25}$

11b. A: True; B: False, it should be $\frac{4}{9}$

12b. $\frac{13}{50}$; $\frac{19}{75}$