1 Subtracting Fractions

1.1 Exercises

Exercise 1 – Solution

Goal

We want to subtract $\frac{3}{7}$ from $\frac{5}{7}$, that is, we want to calculate $\frac{5}{7} - \frac{3}{7}$.

Simplify?

Neither $\frac{5}{7}$ nor $\frac{3}{4}$ can be simplified.

Least Common Denominator

$$\frac{5}{7} \; ; \; \frac{3}{7}$$

Subtract

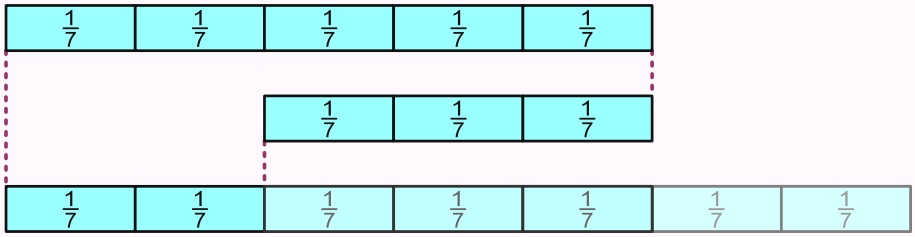
$$\frac{5}{7} - \frac{3}{7} = \frac{2}{7}$$

Simplify?

$\frac{2}{7}$ cannot be simplified.

Result

$$\frac{5}{7} - \frac{3}{7} = \frac{2}{7}$$



Exercise 1 – Level 1

Goal

$$\frac{5}{7} - \frac{3}{7}$$

Simplify?

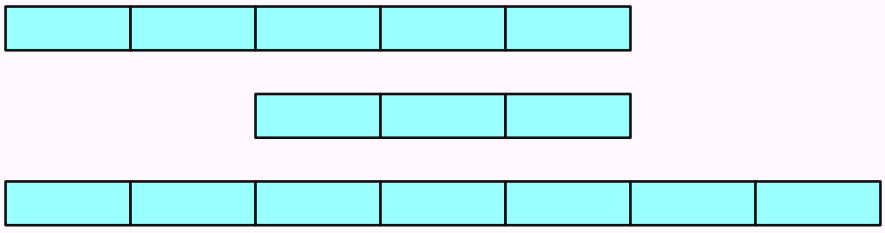
$\frac{5}{7} =$ $\frac{3}{7} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 1 – Level 2

Goal

$$\frac{5}{7} - \frac{3}{7}$$

Simplify?

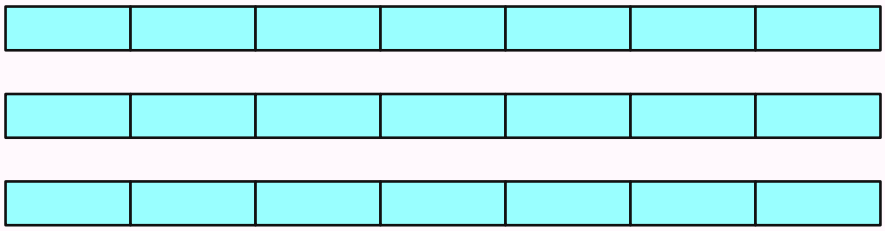
$\frac{5}{7} =$ $\frac{3}{7} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 1 – Level 3

Goal

$$\frac{5}{7} - \frac{3}{7}$$

Simplify?

$\frac{5}{7} =$ $\frac{3}{7} =$

Least Common Denominator

Subtract

Simplify?

Result

Exercise 2 – Solution

Goal

We want to subtract $\frac{4}{9}$ from $\frac{8}{9}$, that is, we want to calculate $\frac{8}{9} - \frac{4}{9}$.

Simplify?

Neither $\frac{8}{9}$ nor $\frac{4}{9}$ can be simplified.

Least Common Denominator

$$\frac{8}{9} \; ; \; \frac{4}{9}$$

Subtract

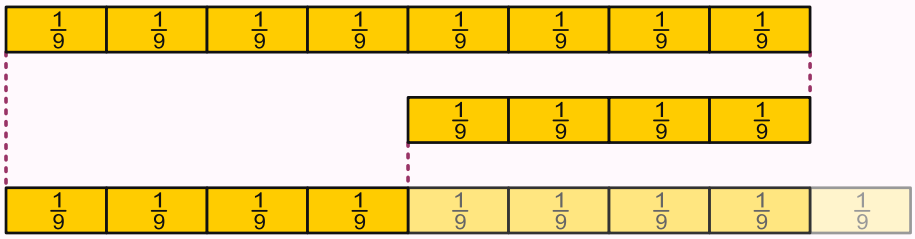
$$\frac{8}{9} - \frac{4}{9} = \frac{4}{9}$$

Simplify?

$\frac{4}{9}$ cannot be simplified.

Result

$$\frac{8}{9} - \frac{4}{9} = \frac{4}{9}$$



Exercise 2 – Level 1

Goal

$$\frac{8}{9} - \frac{4}{9}$$

Simplify?

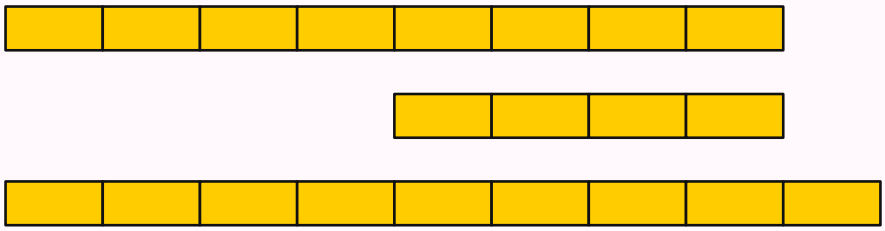
$\frac{8}{9} =$ $\frac{4}{9} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 2 – Level 2

Goal

$$\frac{8}{9} - \frac{4}{9}$$

Simplify?

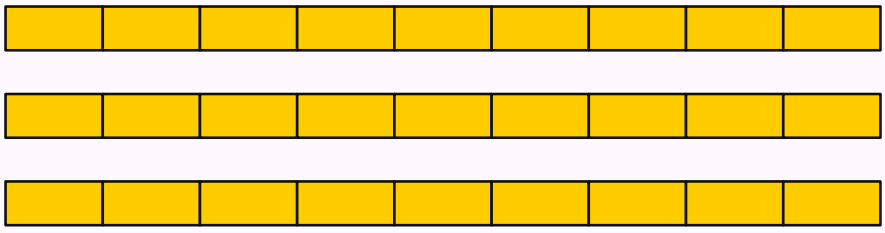
$\frac{8}{9} =$ $\frac{4}{9} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 2 – Level 3

Goal

$$\frac{8}{9} - \frac{4}{9}$$

Simplify?

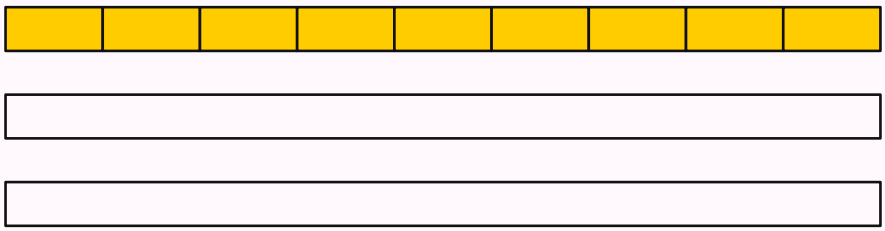
$\frac{8}{9} =$ $\frac{4}{9} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 3 – Solution

Goal

We want to subtract $\frac{1}{11}$ from $\frac{9}{11}$,
that is, we want to calculate $\frac{9}{11} - \frac{1}{11}$.

Simplify?

Neither $\frac{9}{11}$ nor $\frac{1}{11}$ can be simplified.

Least Common Denominator

$$\frac{9}{11} \; ; \; \frac{1}{11}$$

Subtract

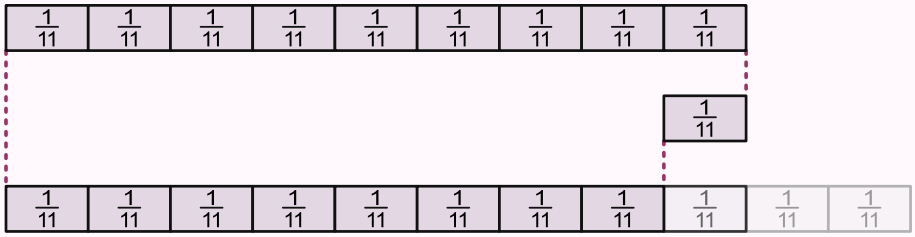
$$\frac{9}{11} - \frac{1}{11} = \frac{8}{11}$$

Simplify?

$\frac{8}{11}$ cannot be simplified.

Result

$$\frac{9}{11} - \frac{1}{11} = \frac{8}{11}$$



Exercise 3 – Level 1

Goal

$$\frac{9}{11} - \frac{1}{11}$$

Simplify?

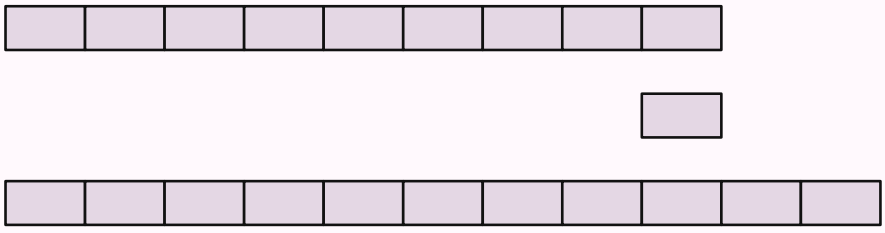
$\frac{9}{11} =$ $\frac{1}{11} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 3 – Level 2

Goal

$$\frac{9}{11} - \frac{1}{11}$$

Simplify?

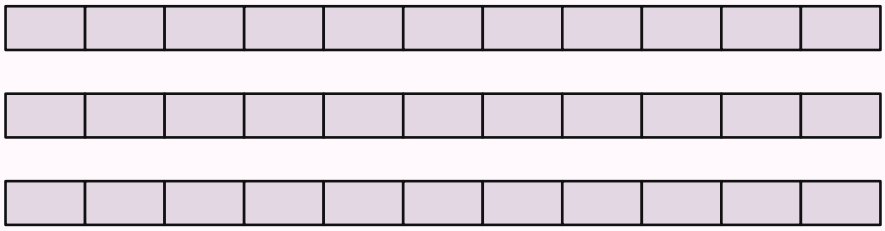
$\frac{9}{11} =$ $\frac{1}{11} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 3 – Level 3

Goal

$$\frac{9}{11} - \frac{1}{11}$$

Simplify?

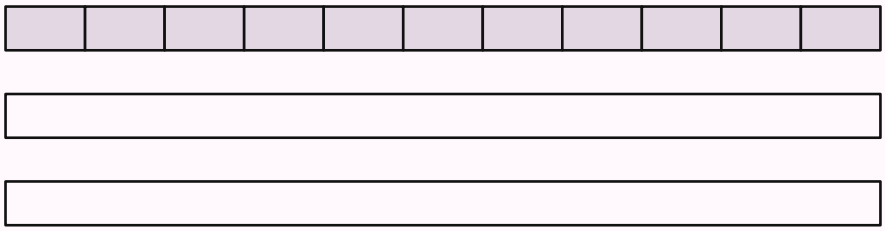
$\frac{9}{11} =$ $\frac{1}{11} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 4 – Solution

Goal

We want to subtract $\frac{1}{6}$ from $\frac{5}{6}$, that is, we want to calculate $\frac{5}{6} - \frac{1}{6}$.

Simplify?

Neither $\frac{5}{6}$ nor $\frac{1}{6}$ can be simplified.

Least Common Denominator

$$\frac{5}{6} \; ; \; \frac{1}{6}$$

Subtract

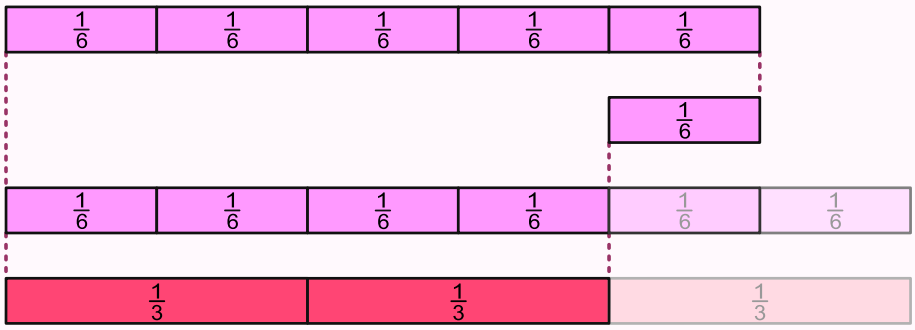
$$\frac{5}{6} - \frac{1}{6} = \frac{4}{6}$$

Simplify?

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

Result

$$\frac{5}{6} - \frac{1}{6} = \frac{4}{6} = \frac{4 \div 2}{6 \div 2} = \frac{2}{3}$$



Exercise 4 – Level 1

Goal

$$\frac{5}{6} - \frac{1}{6}$$

Simplify?

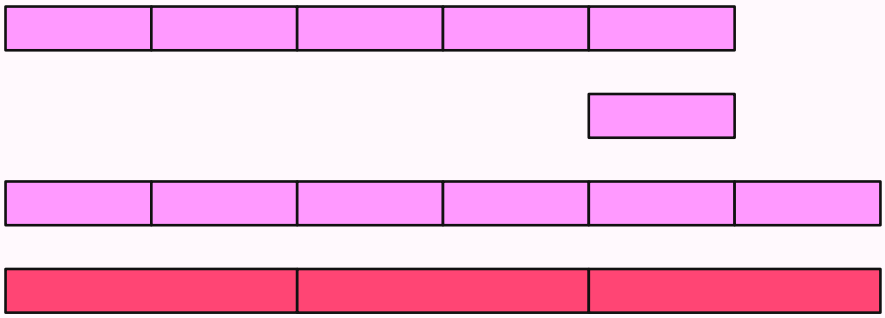
$\frac{5}{6} =$ $\frac{1}{6} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 4 – Level 2

Goal

$$\frac{5}{6} - \frac{1}{6}$$

Simplify?

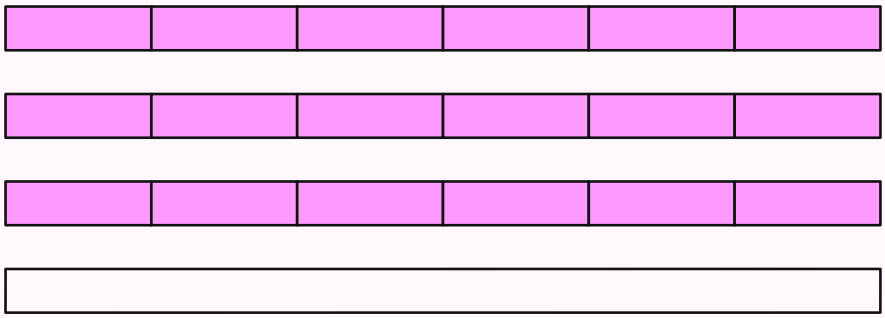
$\frac{5}{6} =$ $\frac{1}{6} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 4 – Level 3

Goal

$$\frac{5}{6} - \frac{1}{6}$$

Simplify?

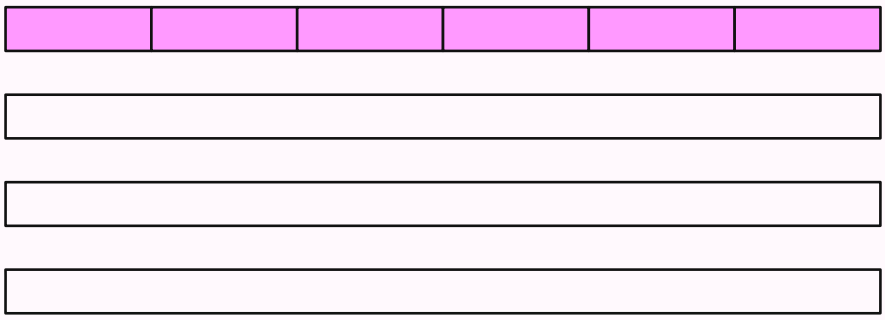
$\frac{5}{6} =$ $\frac{1}{6} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 5 – Solution

Goal

We want to subtract $\frac{5}{16}$ from $\frac{13}{16}$,
that is, we want to calculate $\frac{13}{16} - \frac{5}{16}$.

Simplify?

Neither $\frac{13}{16}$ nor $\frac{5}{16}$ can be simplified.

Least Common Denominator

$$\frac{13}{16} \; ; \; \frac{5}{16}$$

Subtract

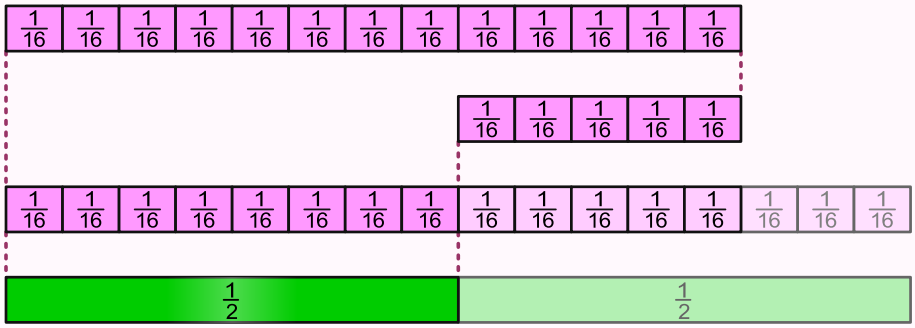
$$\frac{13}{16} - \frac{5}{16} = \frac{8}{16}$$

Simplify?

$$\frac{8}{16} = \frac{8 \div 8}{16 \div 8} = \frac{1}{2}$$

Result

$$\frac{13}{16} - \frac{5}{16} = \frac{8}{16} = \frac{8 \div 8}{16 \div 8} = \frac{1}{2}$$



Exercise 5 – Level 1

Goal

$$\frac{13}{16} - \frac{5}{16}$$

Simplify?

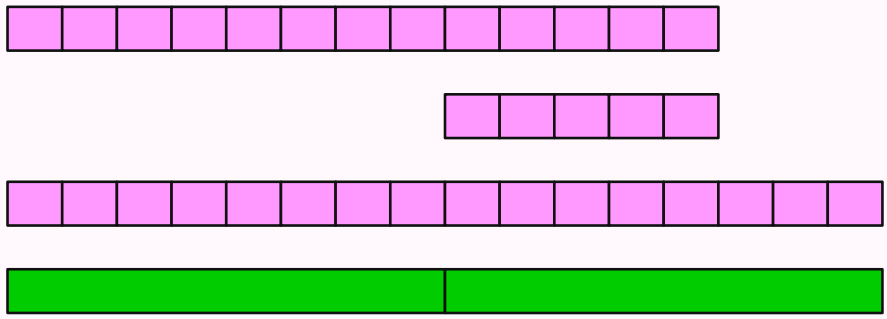
$\frac{13}{16} =$ $\frac{5}{16} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 5 – Level 2

Goal

$$\frac{13}{16} - \frac{5}{16}$$

Simplify?

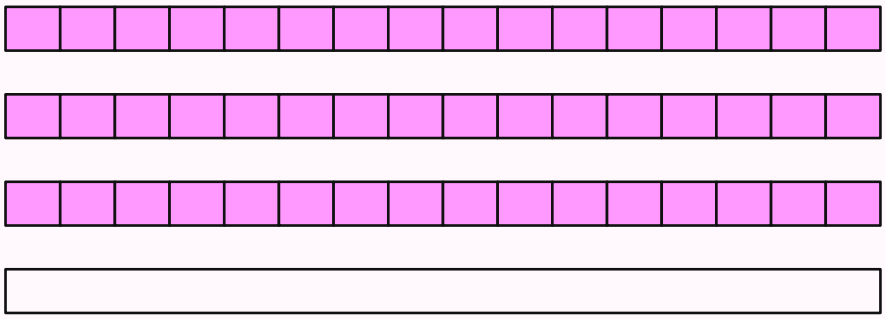
$\frac{13}{16} =$ $\frac{5}{16} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 5 – Level 3

Goal

$$\frac{13}{16} - \frac{5}{16}$$

Simplify?

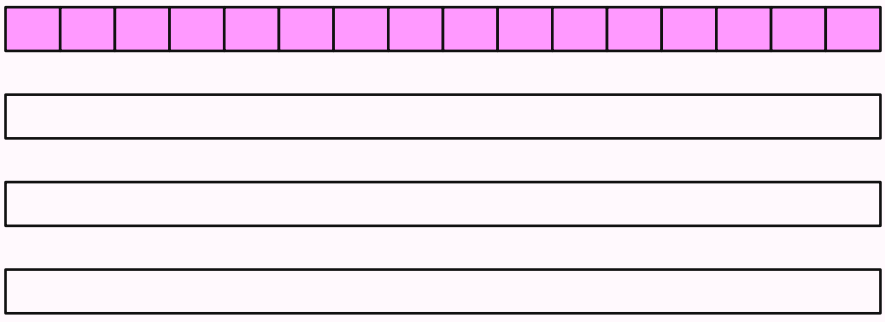
$\frac{13}{16} =$ $\frac{5}{16} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 6 – Solution

Goal

We want to subtract $\frac{7}{12}$ from $\frac{11}{12}$,
that is, we want to calculate $\frac{11}{12} - \frac{7}{12}$.

Simplify?

Neither $\frac{11}{12}$ nor $\frac{7}{12}$ can be simplified.

Least Common Denominator

$$\frac{11}{12} \; ; \; \frac{7}{12}$$

Subtract

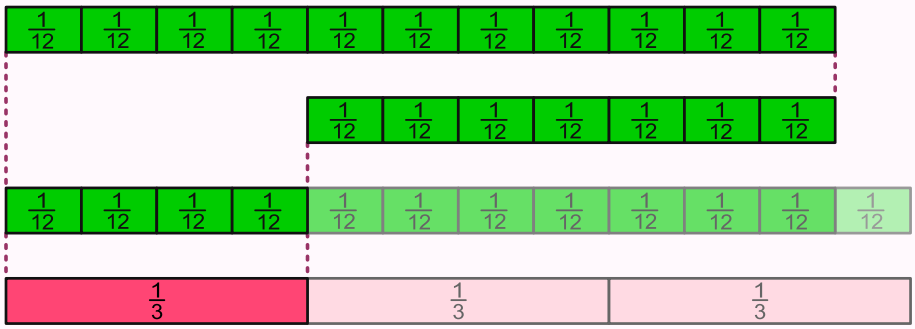
$$\frac{11}{12} - \frac{7}{12} = \frac{4}{12}$$

Simplify?

$$\frac{4}{12} = \frac{4 \div 4}{12 \div 4} = \frac{1}{3}$$

Result

$$\frac{11}{12} - \frac{7}{12} = \frac{4}{12} = \frac{4 \div 4}{12 \div 4} = \frac{1}{3}$$



Exercise 6 – Level 1

Goal

$$\frac{11}{12} - \frac{7}{12}$$

Simplify?

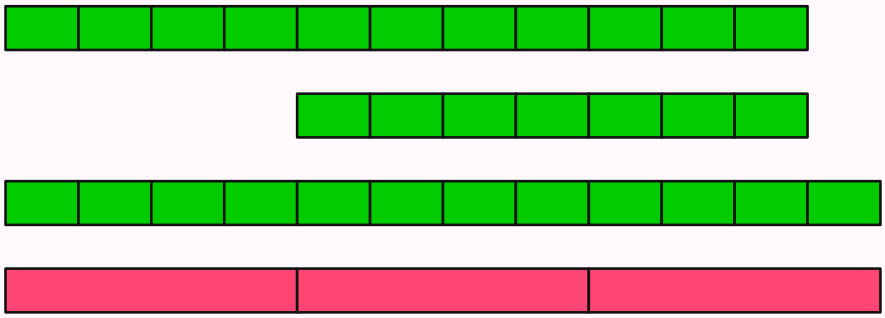
$\frac{11}{12} =$ $\frac{7}{12} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 6 – Level 2

Goal

$$\frac{11}{12} - \frac{7}{12}$$

Simplify?

$\frac{11}{12} =$ $\frac{7}{12} =$

Least Common Denominator

Subtract

Simplify?

Result

Exercise 6 – Level 3

Goal

$$\frac{11}{12} - \frac{7}{12}$$

Simplify?

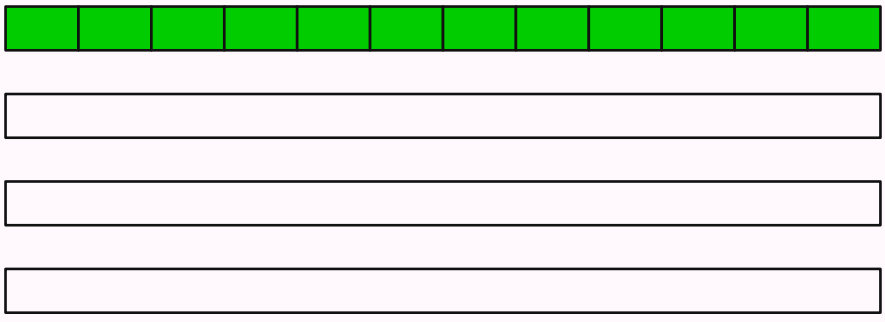
$\frac{11}{12} =$ $\frac{7}{12} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 7 – Solution

Goal

We want to subtract $\frac{11}{18}$ from $\frac{17}{18}$,
that is, we want to calculate $\frac{17}{18} - \frac{11}{18}$.

Simplify?

Neither $\frac{17}{18}$ nor $\frac{11}{18}$ can be simplified.

Least Common Denominator

$$\frac{17}{18} \; ; \; \frac{11}{18}$$

Subtract

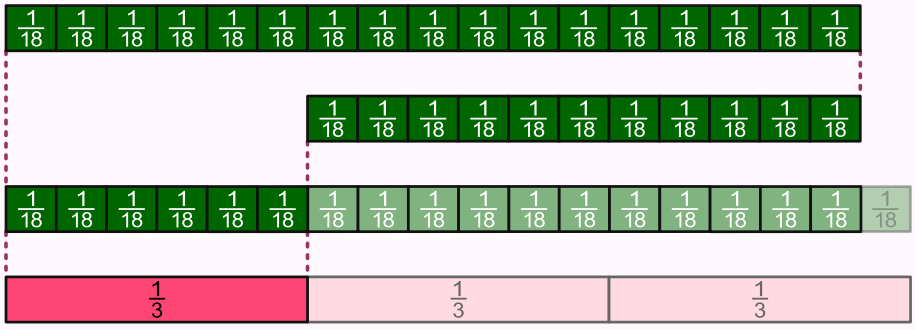
$$\frac{17}{18} - \frac{11}{18} = \frac{6}{18}$$

Simplify?

$$\frac{6}{18} = \frac{6 \div 6}{18 \div 6} = \frac{1}{3}$$

Result

$$\frac{17}{18} - \frac{11}{18} = \frac{6}{18} = \frac{6 \div 6}{18 \div 6} = \frac{1}{3}$$



Exercise 7 – Level 1

Goal

$$\frac{17}{18} - \frac{11}{18}$$

Simplify?

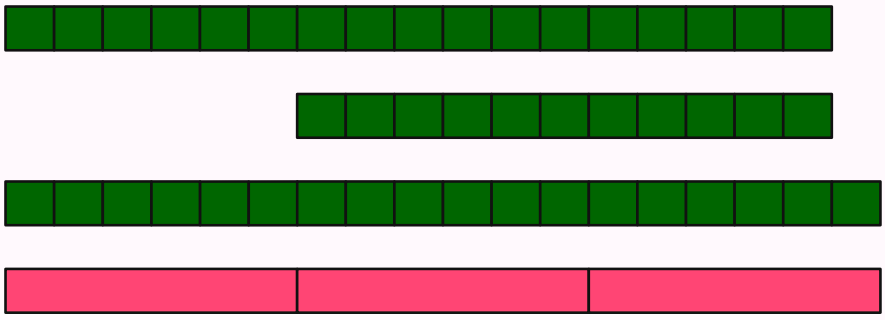
$\frac{17}{18} =$ $\frac{11}{18} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 7 – Level 2

Goal

$$\frac{17}{18} - \frac{11}{18}$$

Simplify?

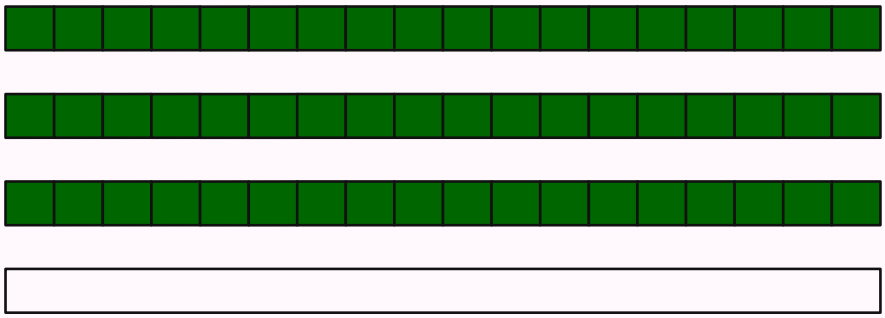
$\frac{17}{18} =$ $\frac{11}{18} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 7 – Level 3

Goal

$$\frac{17}{18} - \frac{11}{18}$$

Simplify?

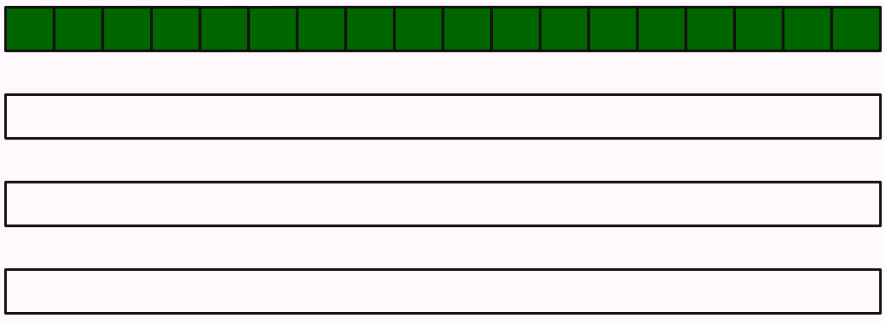
$\frac{17}{18} =$ $\frac{11}{18} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 8 – Solution

Goal

We want to subtract $\frac{3}{8}$ from $\frac{7}{8}$,
that is, we want to calculate $\frac{7}{8} - \frac{3}{8}$.

Simplify?

Neither $\frac{7}{8}$ nor $\frac{3}{8}$ can be simplified.

Least Common Denominator

$$\frac{7}{8} \; ; \; \frac{3}{8}$$

Subtract

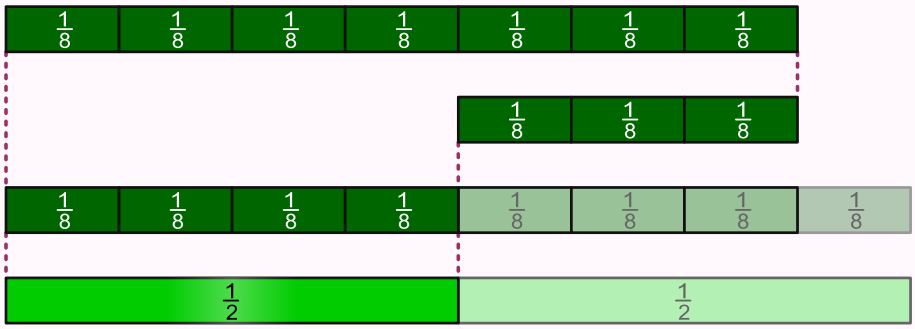
$$\frac{7}{8} - \frac{3}{8} = \frac{4}{8}$$

Simplify?

$$\frac{4}{8} = \frac{4 \div 4}{8 \div 4} = \frac{1}{2}$$

Result

$$\frac{7}{8} - \frac{3}{8} = \frac{4}{8} = \frac{4 \div 4}{8 \div 4} = \frac{1}{2}$$



Exercise 8 – Level 1

Goal

$$\frac{7}{8} - \frac{3}{8}$$

Simplify?

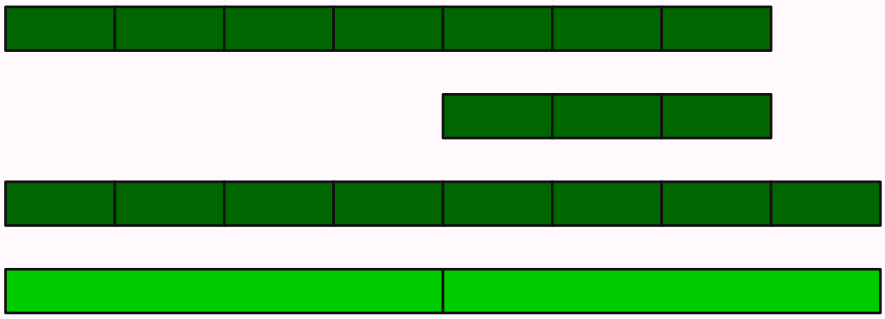
$\frac{7}{8} =$ $\frac{3}{8} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 8 – Level 2

Goal

$$\frac{7}{8} - \frac{3}{8}$$

Simplify?

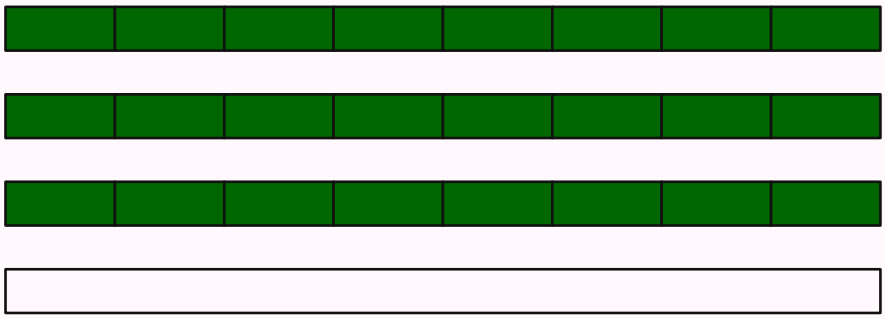
$\frac{7}{8} =$ $\frac{3}{8} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 8 – Level 3

Goal

$$\frac{7}{8} - \frac{3}{8}$$

Simplify?

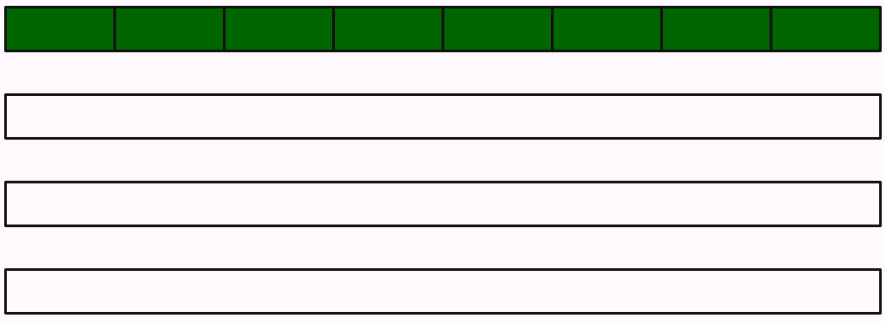
$\frac{7}{8} =$ $\frac{3}{8} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 9 – Solution

Goal

We want to subtract $\frac{11}{15}$ from $\frac{14}{15}$,
that is, we want to calculate $\frac{14}{15} - \frac{11}{15}$.

Simplify?

Neither $\frac{14}{15}$ nor $\frac{11}{15}$ can be simplified.

Least Common Denominator

$$\frac{14}{15} \; ; \; \frac{11}{15}$$

Subtract

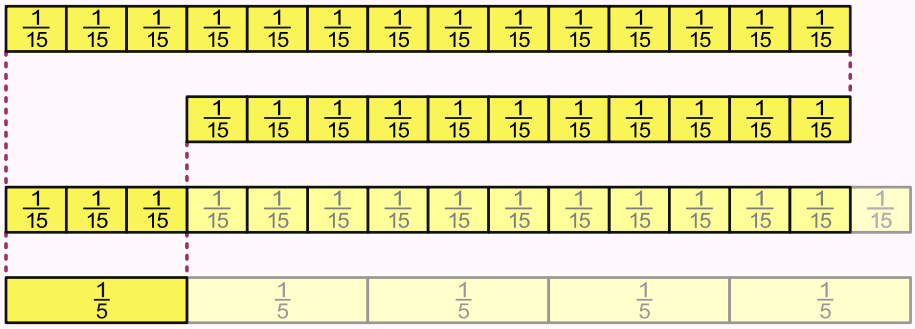
$$\frac{14}{15} - \frac{11}{15} = \frac{3}{15}$$

Simplify?

$$\frac{3}{15} = \frac{3 \div 3}{15 \div 3} = \frac{1}{5}$$

Result

$$\frac{14}{15} - \frac{11}{15} = \frac{3}{15} = \frac{3 \div 3}{15 \div 3} = \frac{1}{5}$$



Exercise 9 – Level 1

Goal

$$\frac{14}{15} - \frac{11}{15}$$

Simplify?

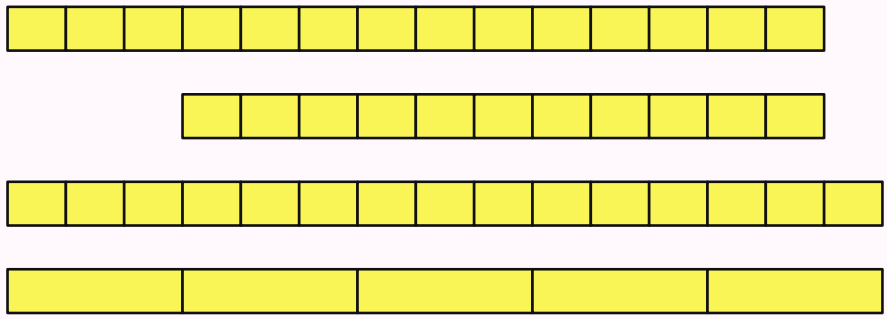
$\frac{14}{15} =$ $\frac{11}{15} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 9 – Level 2

Goal

$$\frac{14}{15} - \frac{11}{15}$$

Simplify?

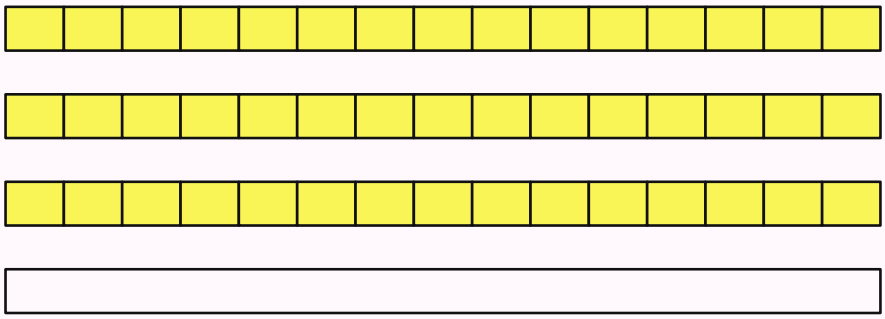
$\frac{14}{15} =$ $\frac{11}{15} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 9 – Level 3

Goal

$$\frac{14}{15} - \frac{11}{15}$$

Simplify?

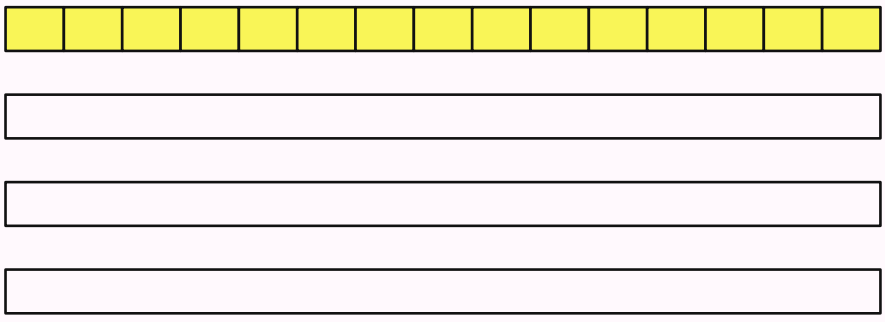
$\frac{14}{15} =$ $\frac{11}{15} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 10 – Solution

Goal

We want to subtract $\frac{1}{3}$ from $\frac{1}{2}$,
that is, we want to calculate $\frac{1}{2} - \frac{1}{3}$.

Simplify?

Neither $\frac{1}{2}$ nor $\frac{1}{3}$ can be simplified.

Least Common Denominator

$$\frac{1}{2} = \frac{1 \times 3}{2 \times 3} = \frac{3}{6} \quad ; \quad \frac{1}{3} = \frac{1 \times 2}{3 \times 2} = \frac{2}{6}$$

Subtract

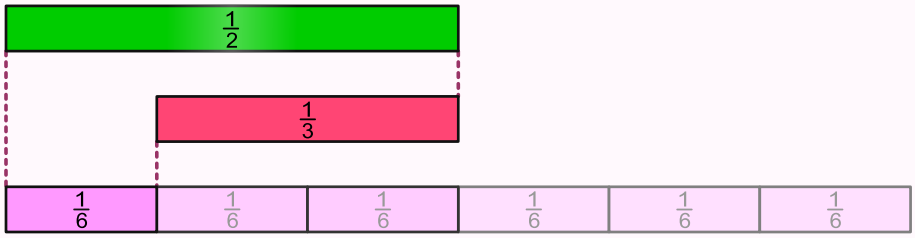
$$\frac{3}{6} - \frac{2}{6} = \frac{1}{6}$$

Simplify?

$\frac{1}{6}$ cannot be simplified.

Result

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



Exercise 10 – Level 1

Goal

$$\frac{1}{2} - \frac{1}{3}$$

Simplify?

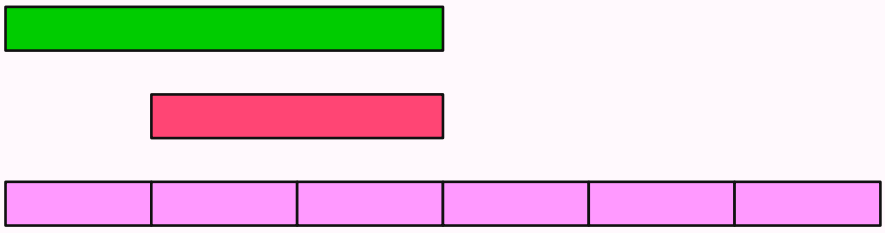
$\frac{1}{2} =$ $\frac{1}{3} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 10 – Level 2

Goal

$$\frac{1}{2} - \frac{1}{3}$$

Simplify?

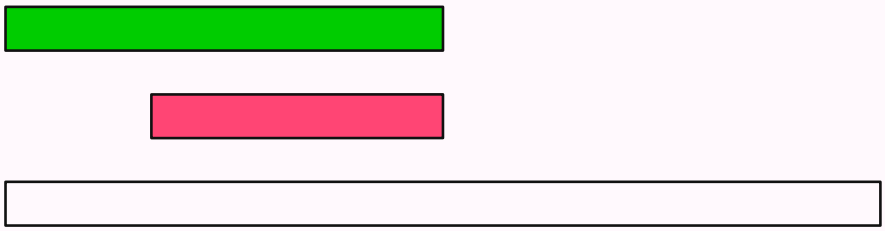
$\frac{1}{2} =$ $\frac{1}{3} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 10 – Level 3

Goal

$$\frac{1}{2} - \frac{1}{3}$$

Simplify?

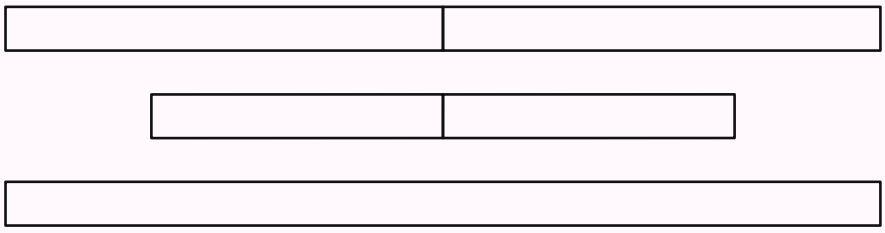
$\frac{1}{2} =$ $\frac{1}{3} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 11 – Solution

Goal

We want to subtract $\frac{1}{2}$ from $\frac{2}{3}$,
that is, we want to calculate $\frac{2}{3} - \frac{1}{2}$.

Simplify?

Neither $\frac{2}{3}$ nor $\frac{1}{2}$ can be simplified.

Least Common Denominator

$$\frac{2}{3} = \frac{2 \times 2}{3 \times 2} = \frac{4}{6} \quad ; \quad \frac{1}{2} = \frac{1 \times 3}{2 \times 3} = \frac{3}{6}$$

Subtract

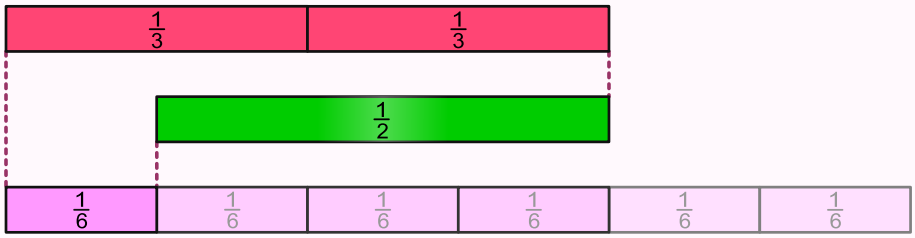
$$\frac{4}{6} - \frac{3}{6} = \frac{1}{6}$$

Simplify?

$\frac{1}{6}$ cannot be simplified.

Result

$$\frac{2}{3} - \frac{1}{2} = \frac{2 \times 2}{3 \times 2} - \frac{1 \times 3}{2 \times 3} = \frac{4}{6} - \frac{3}{6} = \frac{1}{6}$$



Exercise 11 – Level 1

Goal

$$\frac{2}{3} - \frac{1}{2}$$

Simplify?

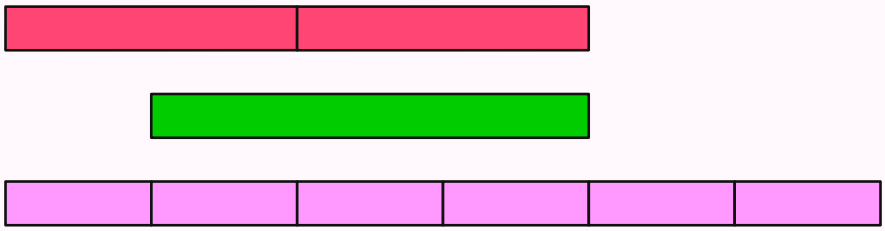
$\frac{2}{3} =$ $\frac{1}{2} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 11 – Level 2

Goal

$$\frac{2}{3} - \frac{1}{2}$$

Simplify?

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

Least Common Denominator

Subtract

Simplify?

Result

Exercise 11 – Level 3

Goal

$$\frac{2}{3} - \frac{1}{2}$$

Simplify?

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

Least Common Denominator

Subtract

Simplify?

Result

Exercise 12 – Solution

Goal

We want to subtract $\frac{2}{3}$ from $\frac{4}{5}$,
that is, we want to calculate $\frac{4}{5} - \frac{2}{3}$.

Simplify?

Neither $\frac{4}{5}$ nor $\frac{2}{3}$ can be simplified.

Least Common Denominator

$$\frac{4}{5} = \frac{4 \times 3}{5 \times 3} = \frac{12}{15} \quad ; \quad \frac{2}{3} = \frac{2 \times 5}{3 \times 5} = \frac{10}{15}$$

Subtract

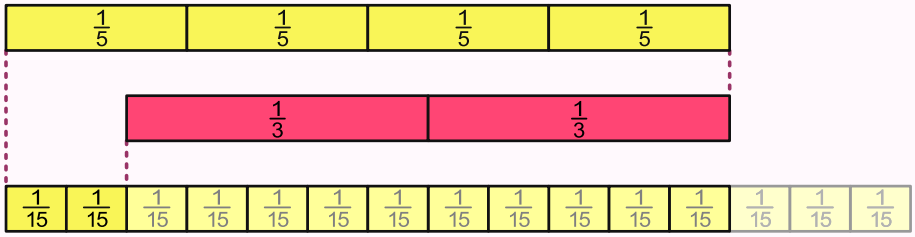
$$\frac{12}{15} - \frac{10}{15} = \frac{2}{15}$$

Simplify?

$\frac{2}{15}$ cannot be simplified.

Result

$$\frac{4}{5} - \frac{2}{3} = \frac{4 \times 3}{5 \times 3} - \frac{2 \times 5}{3 \times 5} = \frac{12}{15} - \frac{10}{15} = \frac{2}{15}$$



Exercise 12 – Level 1

Goal

$$\frac{4}{5} - \frac{2}{3}$$

Simplify?

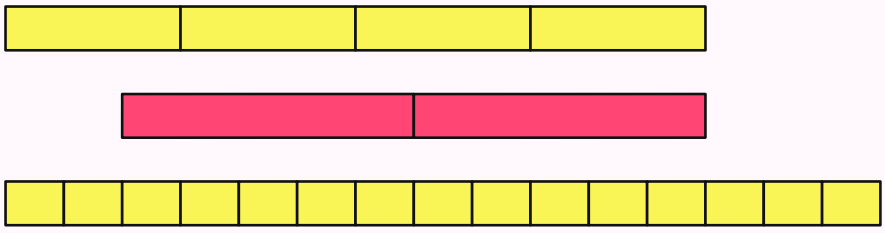
$\frac{4}{5} =$ $\frac{2}{3} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 12 – Level 2

Goal

$$\frac{4}{5} - \frac{2}{3}$$

Simplify?

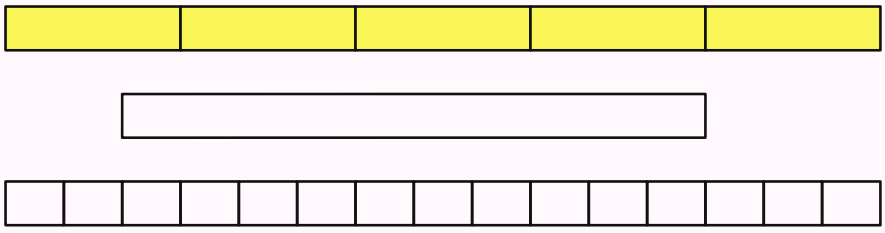
$\frac{4}{5} =$ $\frac{2}{3} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 12 – Level 3

Goal

$$\frac{4}{5} - \frac{2}{3}$$

Simplify?

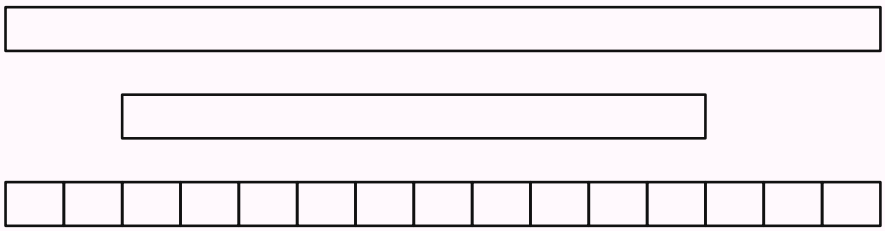
$\frac{4}{5} =$ $\frac{2}{3} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 13 – Solution

Goal

We want to subtract $\frac{3}{7}$ from $\frac{3}{4}$,
that is, we want to calculate $\frac{3}{4} - \frac{3}{7}$.

Simplify?

Neither $\frac{3}{4}$ nor $\frac{3}{7}$ can be simplified.

Least Common Denominator

$$\frac{3}{4} = \frac{3 \times 7}{4 \times 7} = \frac{21}{28} \; ; \quad \frac{3}{7} = \frac{3 \times 4}{7 \times 4} = \frac{12}{28}$$

Subtract

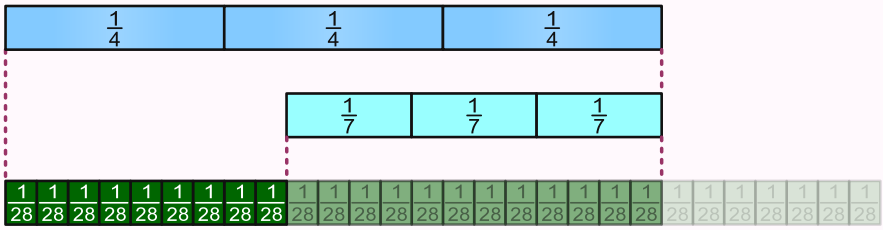
$$\frac{21}{28} - \frac{12}{28} = \frac{9}{28}$$

Simplify?

$\frac{9}{28}$ cannot be simplified.

Result

$$\frac{3}{4} - \frac{3}{7} = \frac{3 \times 7}{4 \times 7} - \frac{3 \times 4}{7 \times 4} = \frac{21}{28} - \frac{12}{28} = \frac{9}{28}$$



Exercise 13 – Level 1

Goal

$$\frac{3}{4} - \frac{3}{7}$$

Simplify?

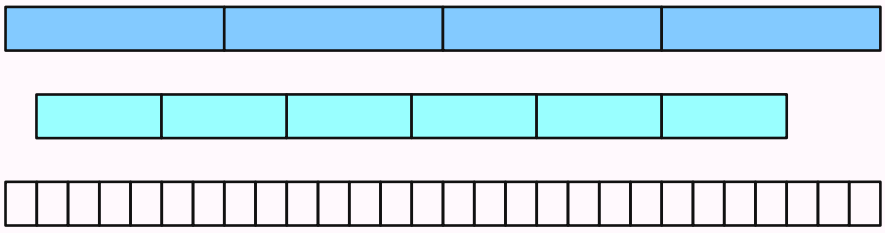
$\frac{3}{4} =$ $\frac{3}{7} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 13 – Level 2

Goal

$$\frac{3}{4} - \frac{3}{7}$$

Simplify?

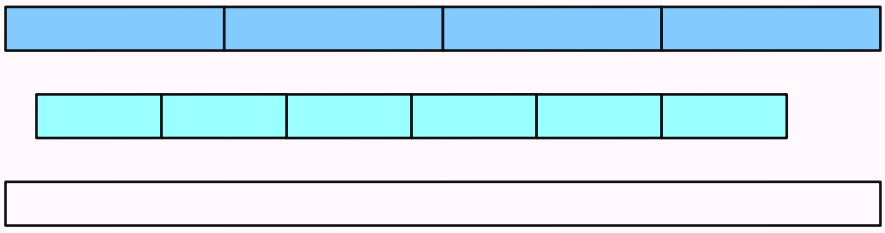
$\frac{3}{4} =$ $\frac{3}{7} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 13 – Level 3

Goal

$$\frac{3}{4} - \frac{3}{7}$$

Simplify?

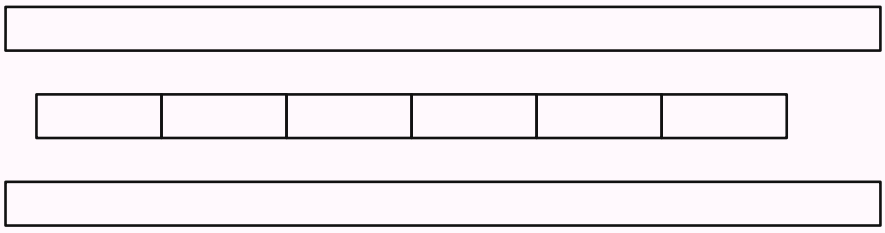
$\frac{3}{4} =$ $\frac{3}{7} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 14 – Solution

Goal

We want to subtract $\frac{1}{4}$ from $\frac{5}{8}$, that is, we want to calculate $\frac{5}{8} - \frac{1}{4}$.

Simplify?

Neither $\frac{5}{8}$ nor $\frac{1}{4}$ can be simplified.

Least Common Denominator

$$\frac{5}{8} \; ; \; \frac{1}{4} = \frac{1 \times 2}{4 \times 2} = \frac{2}{8}$$

Subtract

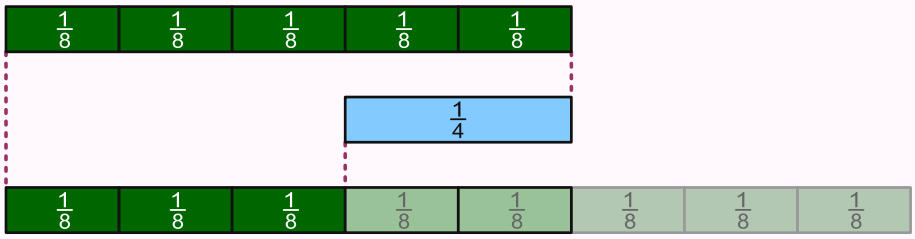
$$\frac{5}{8} - \frac{2}{8} = \frac{3}{8}$$

Simplify?

$\frac{3}{8}$ cannot be simplified.

Result

$$\frac{5}{8} - \frac{1}{4} = \frac{5}{8} - \frac{1 \times 2}{4 \times 2} = \frac{5}{8} - \frac{2}{8} = \frac{3}{8}$$



Exercise 14 – Level 1

Goal

$$\frac{5}{8} - \frac{1}{4}$$

Simplify?

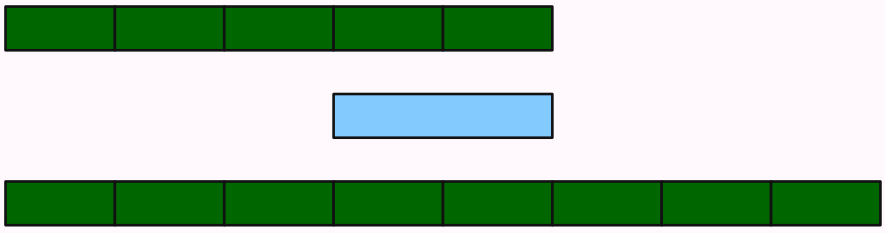
$\frac{5}{8} =$ $\frac{1}{4} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 14 – Level 2

Goal

$$\frac{5}{8} - \frac{1}{4}$$

Simplify?

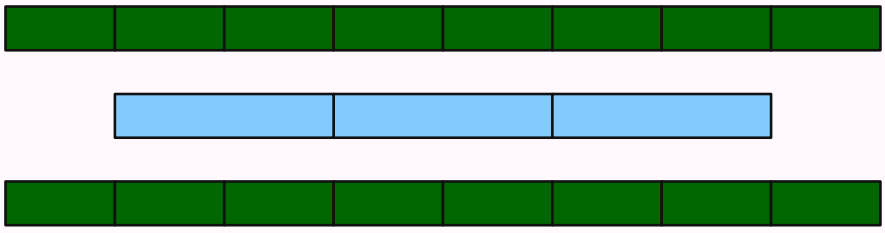
$\frac{5}{8} =$ $\frac{1}{4} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 14 – Level 3

Goal

$$\frac{5}{8} - \frac{1}{4}$$

Simplify?

$\frac{5}{8} =$ $\frac{1}{4} =$

Least Common Denominator

Subtract

Simplify?

Result

Exercise 15 – Solution

Goal

We want to subtract $\frac{1}{2}$ from $\frac{10}{13}$, that is, we want to calculate $\frac{10}{13} - \frac{1}{2}$.

Simplify?

Neither $\frac{10}{13}$ nor $\frac{1}{2}$ can be simplified.

Least Common Denominator

$$\frac{10}{13} = \frac{10 \times 2}{13 \times 2} = \frac{20}{26} \quad ; \quad \frac{1}{2} = \frac{1 \times 13}{2 \times 13} = \frac{13}{26}$$

Subtract

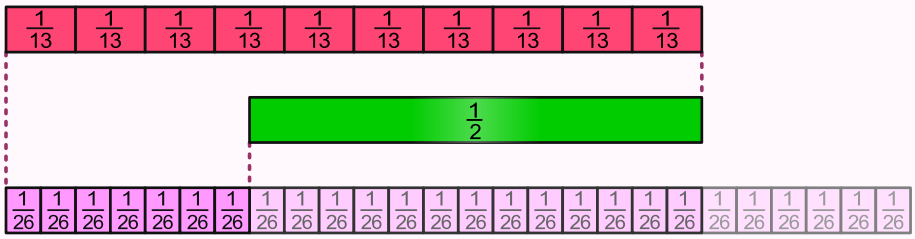
$$\frac{20}{26} - \frac{13}{26} = \frac{7}{26}$$

Simplify?

$\frac{7}{26}$ cannot be simplified.

Result

$$\frac{10}{13} - \frac{1}{2} = \frac{10 \times 2}{13 \times 2} - \frac{1 \times 13}{2 \times 13} = \frac{20}{26} - \frac{13}{20} = \frac{7}{26}$$



Exercise 15 – Level 1

Goal

$$\frac{10}{13} - \frac{1}{2}$$

Simplify?

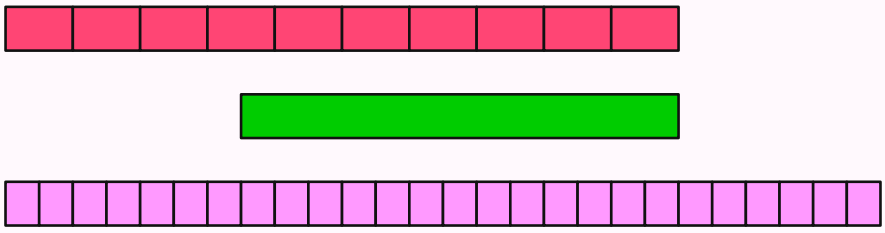
$\frac{10}{13} =$ $\frac{1}{2} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 15 – Level 2

Goal

$$\frac{10}{13} - \frac{1}{2}$$

Simplify?

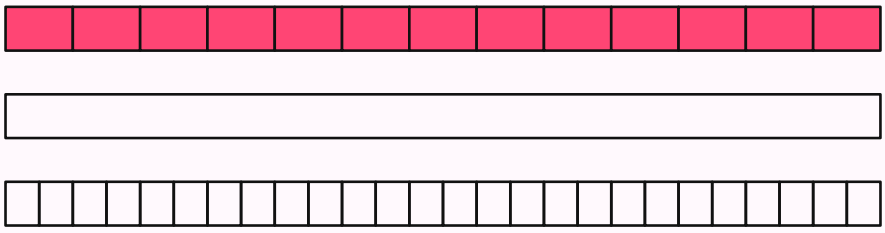
$\frac{10}{13} =$ $\frac{1}{2} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 15 – Level 3

Goal

$$\frac{10}{13} - \frac{1}{2}$$

Simplify?

$\frac{10}{13} =$ $\frac{1}{2} =$

Least Common Denominator

Subtract

Simplify?

Result

Exercise 16 – Solution

Goal

We want to subtract $\frac{6}{9}$ from $\frac{6}{8}$, that is, we want to calculate $\frac{6}{8} - \frac{6}{9}$.

Simplify?

$$\frac{6}{8} = \frac{6 \div 2}{8 \div 2} = \frac{3}{4} \quad ; \quad \frac{6}{9} = \frac{6 \div 3}{9 \div 3} = \frac{2}{3}$$

Least Common Denominator

$$\frac{3}{4} = \frac{3 \times 3}{4 \times 3} = \frac{9}{12} \; ; \; \frac{2}{3} = \frac{2 \times 4}{3 \times 4} = \frac{8}{12}$$

Subtract

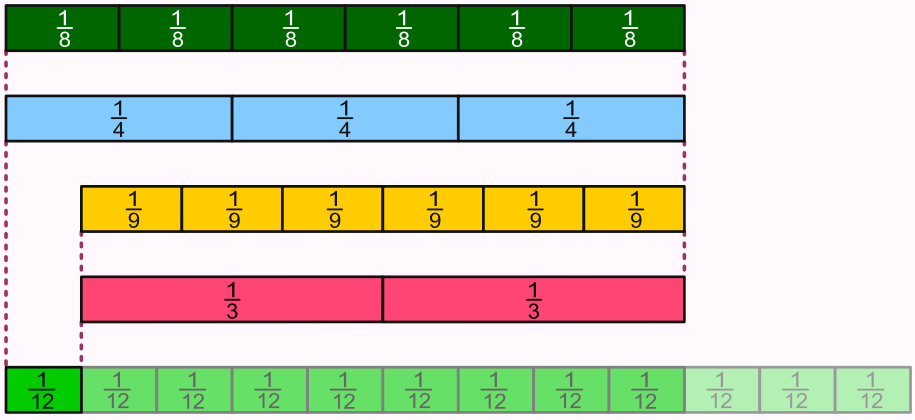
$$\frac{9}{12} - \frac{8}{12} = \frac{1}{12}$$

Simplify?

$\frac{1}{12}$ cannot be simplified.

Result

$$\frac{6}{8} - \frac{6}{9} = \frac{6 \div 2}{8 \div 2} - \frac{6 \div 3}{9 \div 3} = \frac{3}{4} - \frac{2}{3} = \frac{3 \times 3}{4 \times 3} - \frac{2 \times 4}{3 \times 4} = \frac{9}{12} - \frac{8}{12} = \frac{1}{12}$$



Exercise 16 – Level 1

Goal

$$\frac{6}{8} - \frac{6}{9}$$

Simplify?

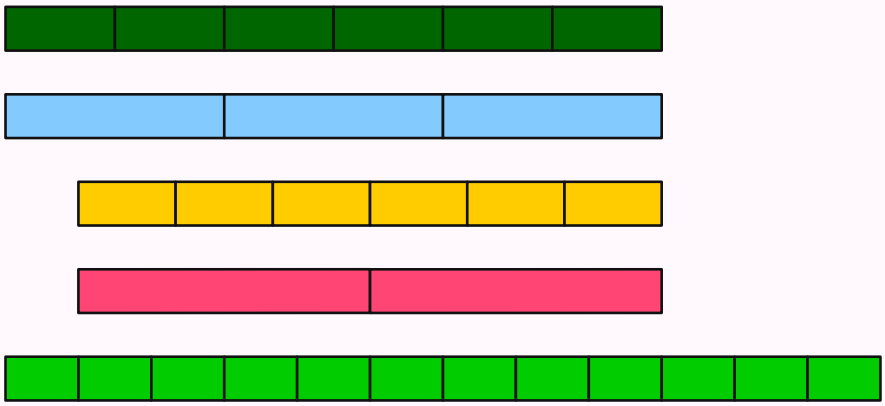
$\frac{6}{8} =$ $\frac{6}{9} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 16 – Level 2

Goal

$$\frac{6}{8} - \frac{6}{9}$$

Simplify?

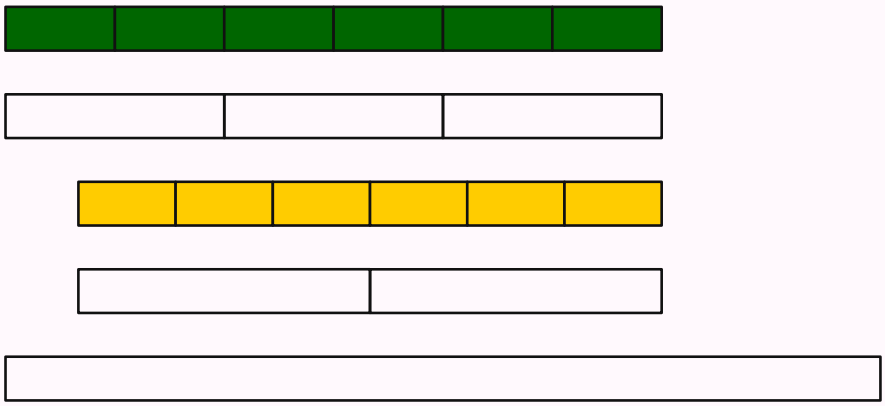
$\frac{6}{8} =$ $\frac{6}{9} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 16 – Level 3

Goal

$$\frac{6}{8} - \frac{6}{9}$$

Simplify?

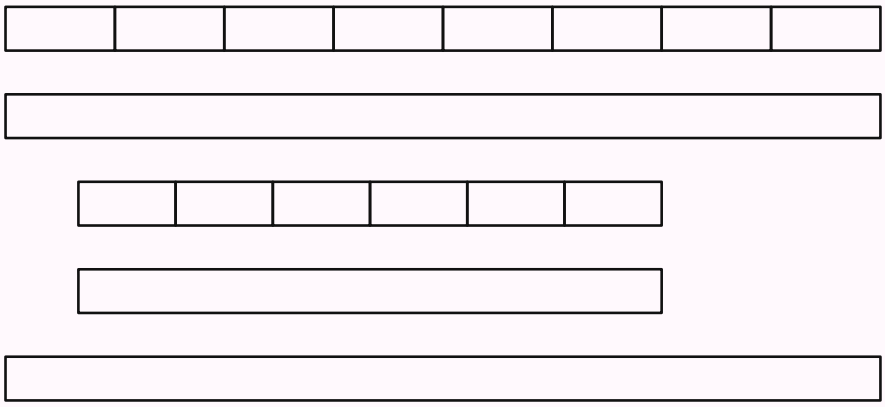
$\frac{6}{8} =$ $\frac{6}{9} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 17 – Solution

Goal

We want to subtract $\frac{7}{14}$ from $\frac{12}{15}$,
that is, we want to calculate $\frac{12}{15} - \frac{7}{14}$.

Simplify?

$$\frac{12}{15} = \frac{12 \div 3}{15 \div 3} = \frac{4}{5} \quad ; \quad \frac{7}{14} = \frac{7 \div 7}{14 \div 7} = \frac{1}{2}$$

Least Common Denominator

$$\frac{4}{5} = \frac{4 \times 2}{5 \times 2} = \frac{8}{10} \; ; \; \frac{1}{2} = \frac{1 \times 5}{2 \times 5} = \frac{5}{10}$$

Subtract

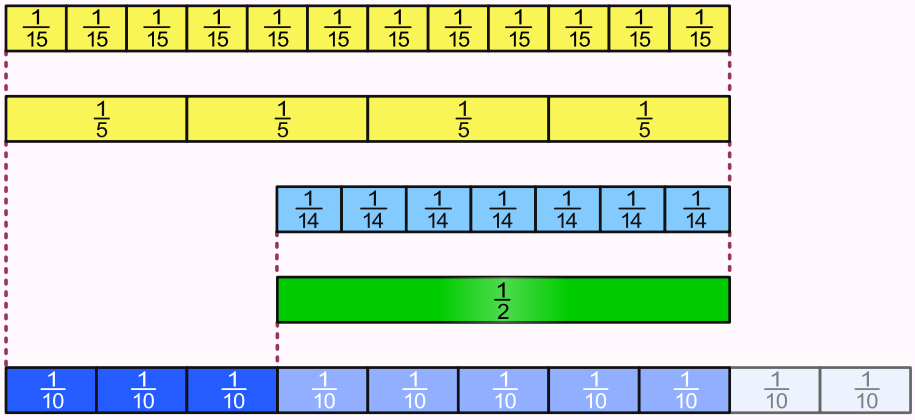
$$\frac{8}{10} - \frac{5}{10} = \frac{3}{10}$$

Simplify?

$\frac{3}{10}$ cannot be simplified.

Result

$$\frac{12}{15} - \frac{7}{14} = \frac{12 \div 3}{15 \div 3} - \frac{7 \div 7}{14 \div 7} = \frac{4}{5} - \frac{1}{2} = \frac{4 \times 2}{10 \times 2} - \frac{1 \times 5}{2 \times 5} = \frac{8}{10} - \frac{5}{10} = \frac{3}{10}$$



Exercise 17 – Level 1

Goal

$$\frac{12}{15} - \frac{7}{14}$$

Simplify?

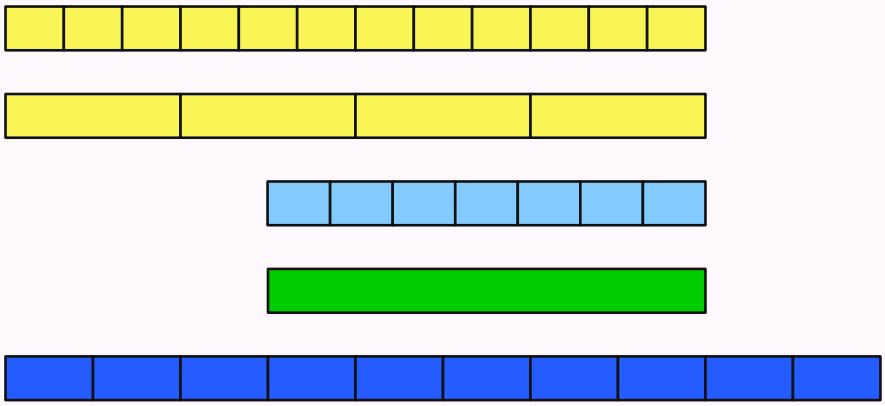
$\frac{12}{15} =$ $\frac{7}{14} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 17 – Level 2

Goal

$$\frac{12}{15} - \frac{7}{14}$$

Simplify?

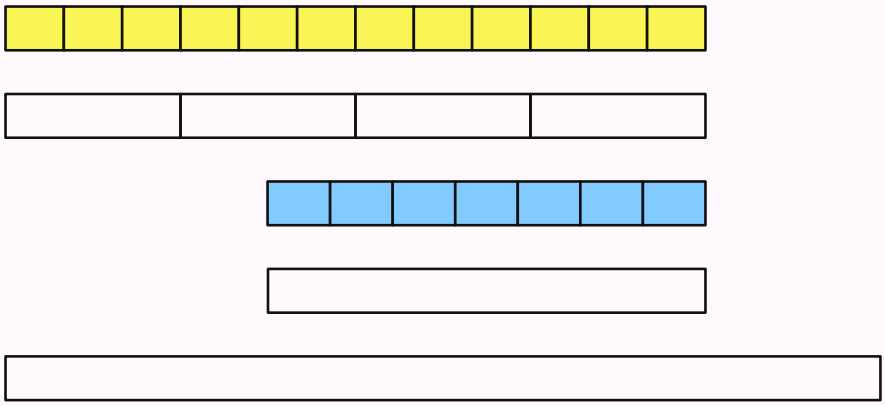
$\frac{12}{15} =$ $\frac{7}{14} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 17 – Level 3

Goal

$$\frac{12}{15} - \frac{7}{14}$$

Simplify?

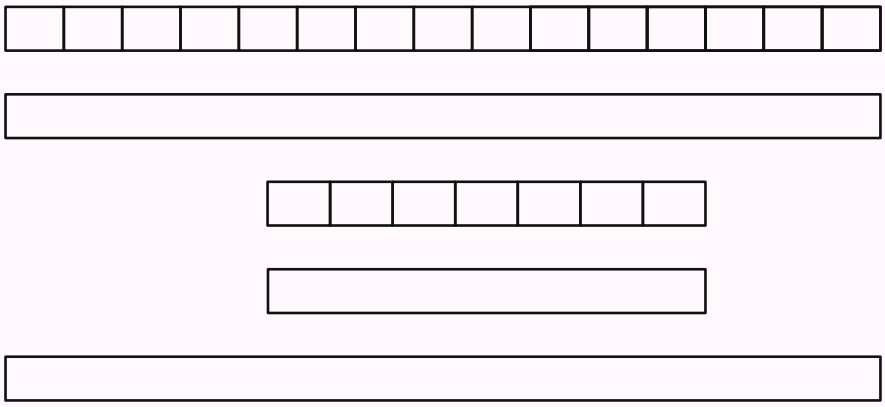
$\frac{12}{15} =$ $\frac{7}{14} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 18 – Solution

Goal

We want to subtract $\frac{3}{9}$ from $\frac{6}{10}$, that is, we want to calculate $\frac{6}{10} - \frac{3}{9}$.

Simplify?

$$\frac{6}{10} = \frac{6 \div 2}{10 \div 2} = \frac{3}{5} \quad ; \quad \frac{3}{9} = \frac{3 \div 3}{9 \div 3} = \frac{1}{3}$$

Least Common Denominator

$$\frac{3}{5} = \frac{3 \times 3}{5 \times 3} = \frac{9}{15} \; ; \; \frac{1}{3} = \frac{1 \times 5}{3 \times 5} = \frac{5}{15}$$

Subtract

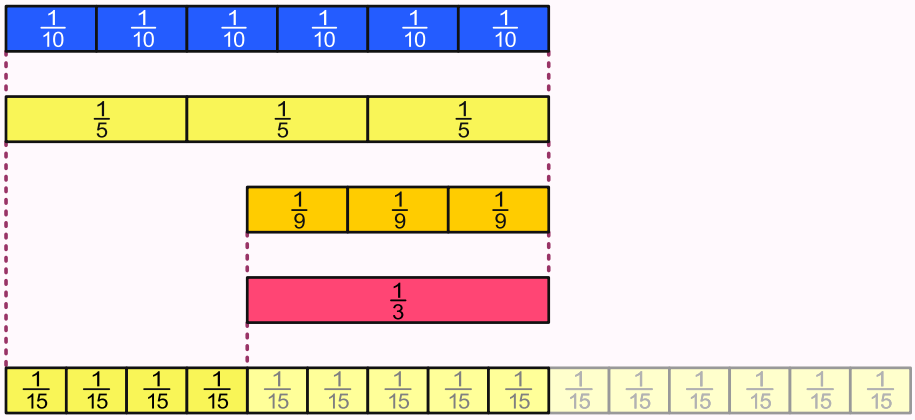
$$\frac{9}{15} - \frac{5}{15} = \frac{4}{15}$$

Simplify?

$\frac{4}{15}$ cannot be simplified.

Result

$$\frac{6}{10} - \frac{3}{9} = \frac{6 \div 2}{10 \div 2} - \frac{3 \div 3}{9 \div 3} = \frac{3}{5} - \frac{1}{3} = \frac{3 \times 3}{5 \times 3} - \frac{1 \times 5}{3 \times 5} = \frac{9}{15} - \frac{5}{15} = \frac{4}{15}$$



Exercise 18 – Level 1

Goal

$$\frac{6}{10} - \frac{3}{9}$$

Simplify?

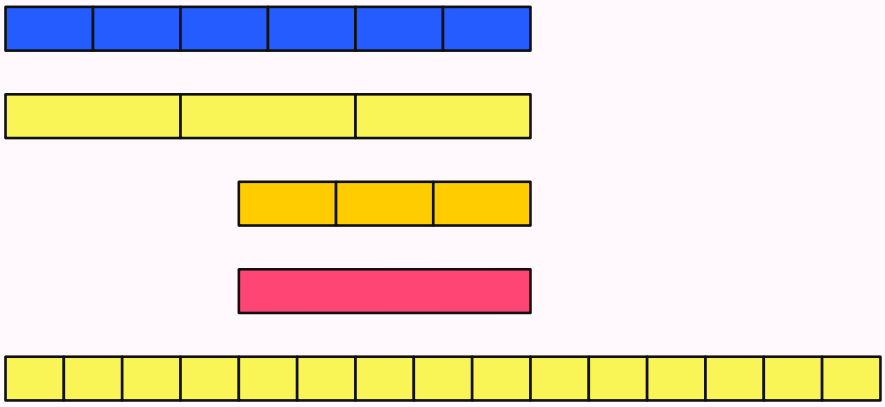
$\frac{6}{10} =$ $\frac{3}{9} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 18 – Level 2

Goal

$$\frac{6}{10} - \frac{3}{9}$$

Simplify?

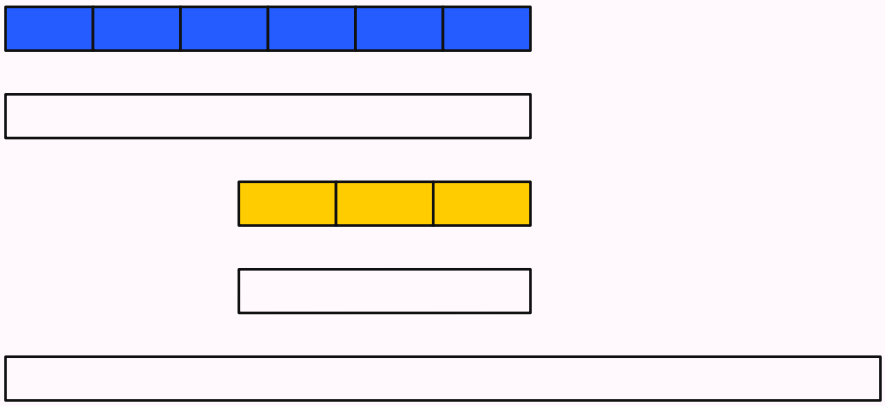
$\frac{6}{10} =$ $\frac{3}{9} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 18 – Level 3

Goal

$$\frac{6}{10} - \frac{3}{9}$$

Simplify?

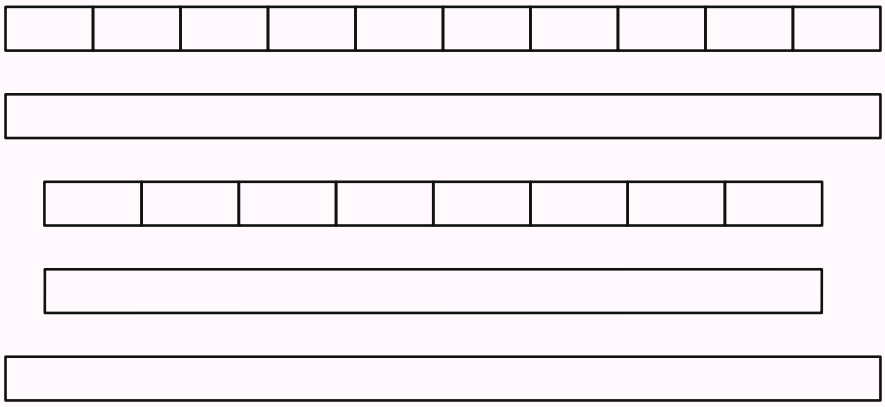
$\frac{6}{10} =$ $\frac{3}{9} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 19 – Solution

Goal

We want to subtract $\frac{3}{18}$ from $\frac{14}{16}$,
that is, we want to calculate $\frac{14}{16} - \frac{3}{18}$.

Simplify?

$$\frac{14}{16} = \frac{14 \div 2}{16 \div 2} = \frac{7}{8} \quad ; \quad \frac{3}{18} = \frac{3 \div 3}{18 \div 3} = \frac{1}{6}$$

Least Common Denominator

$$\frac{7}{8} = \frac{7 \times 3}{8 \times 3} = \frac{21}{24} \; ; \; \frac{1}{6} = \frac{1 \times 4}{6 \times 4} = \frac{4}{24}$$

Subtract

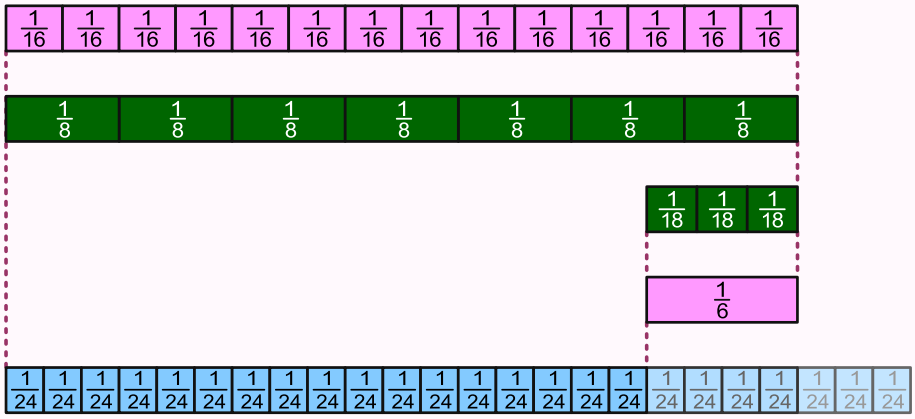
$$\frac{21}{24} - \frac{4}{24} = \frac{17}{24}$$

Simplify?

$\frac{17}{24}$ cannot be simplified.

Result

$$\frac{14}{16} - \frac{3}{18} = \frac{14 \div 2}{16 \div 2} - \frac{3 \div 3}{18 \div 3} = \frac{7}{8} - \frac{1}{6} = \frac{7 \times 3}{8 \times 3} - \frac{1 \times 4}{6 \times 4} = \frac{21}{24} - \frac{4}{24} = \frac{17}{24}$$



Exercise 19 – Level 1

Goal

$$\frac{14}{16} - \frac{3}{18}$$

Simplify?

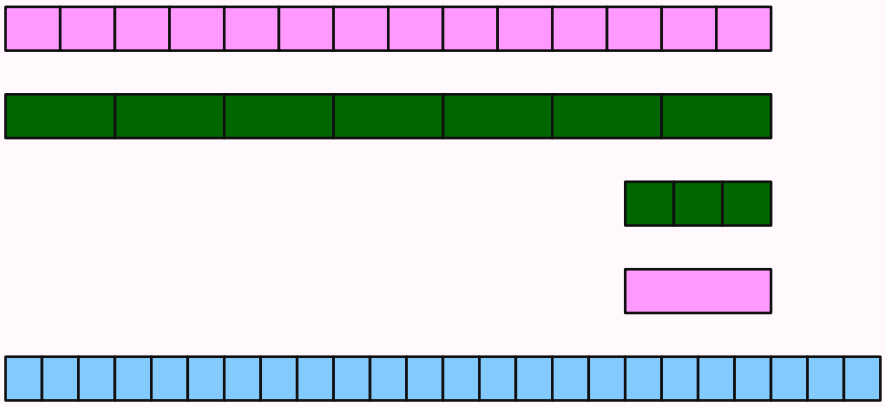
$\frac{14}{16} =$ $\frac{3}{18} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 19 – Level 2

Goal

$$\frac{14}{16} - \frac{3}{18}$$

Simplify?

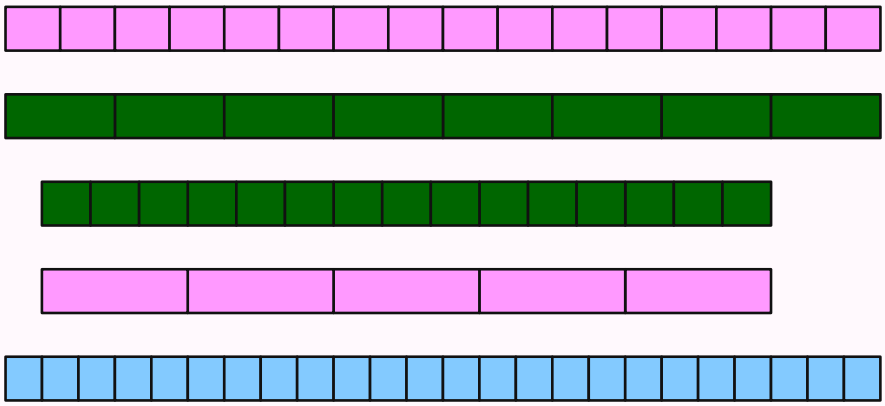
$\frac{14}{16} =$ $\frac{3}{18} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 19 – Level 3

Goal

$$\frac{14}{16} - \frac{3}{18}$$

Simplify?

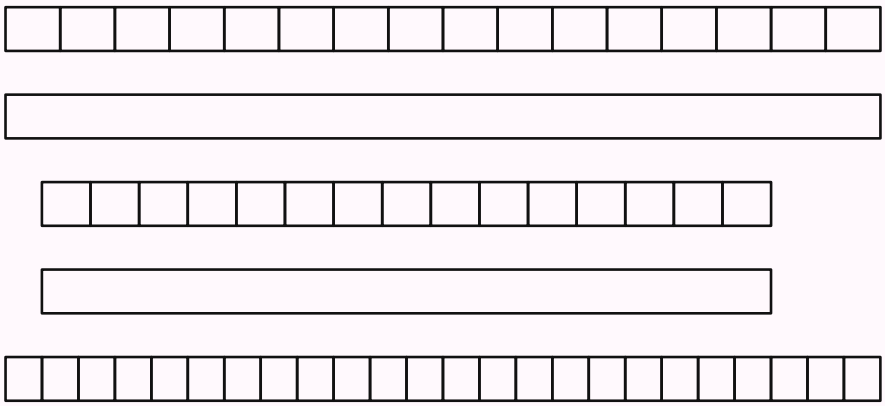
$\frac{14}{16} =$ $\frac{3}{18} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 20 – Solution

Goal

We want to subtract $\frac{10}{34}$ from $\frac{15}{17}$,
that is, we want to calculate $\frac{15}{17} - \frac{10}{34}$.

Simplify?

$$\frac{15}{17} \quad ; \quad \frac{10}{34} = \frac{10 \div 2}{34 \div 2} = \frac{5}{17}$$

Least Common Denominator

$$\frac{15}{17} \quad ; \quad \frac{5}{17}$$

Subtract

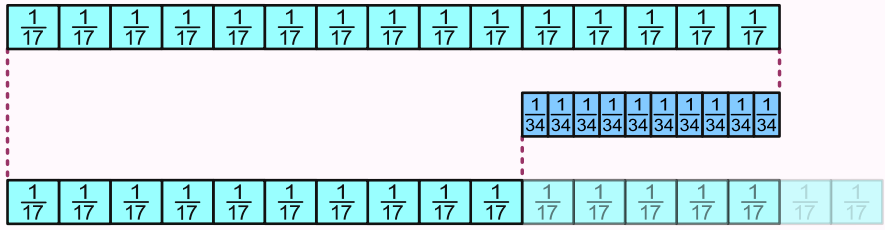
$$\frac{15}{17} - \frac{5}{17} = \frac{10}{17}$$

Simplify?

$\frac{10}{17}$ cannot be simplified.

Result

$$\frac{15}{17} - \frac{10}{34} = \frac{15}{17} - \frac{10 \div 2}{34 \div 2} = \frac{15}{17} - \frac{5}{17} = \frac{10}{17}$$



Exercise 20 – Level 1

Goal

$$\frac{15}{17} - \frac{10}{34}$$

Simplify?

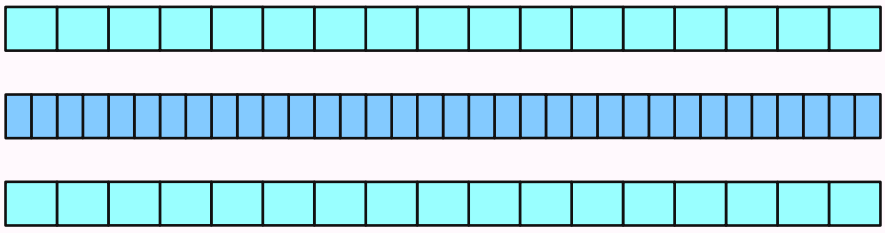
$\frac{15}{17} =$ $\frac{10}{34} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 20 – Level 2

Goal

$$\frac{15}{17} - \frac{10}{34}$$

Simplify?

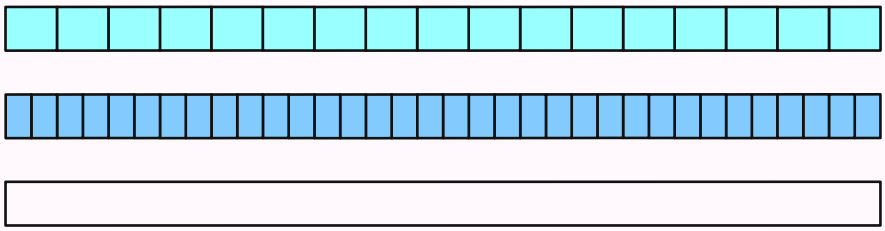
$\frac{15}{17} =$ $\frac{10}{34} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 20 – Level 3

Goal

$$\frac{15}{17} - \frac{10}{34}$$

Simplify?

$\frac{15}{17} =$ $\frac{10}{34} =$

Least Common Denominator

Subtract

Simplify?

Result

Exercise 21 – Solution

Goal

We want to subtract $\frac{1}{6}$ from $\frac{2}{3}$,
that is, we want to calculate $\frac{2}{3} - \frac{1}{6}$.

Simplify?

Neither $\frac{2}{3}$ nor $\frac{1}{6}$ can be simplified.

Least Common Denominator

$$\frac{2}{3} = \frac{2 \times 2}{3 \times 2} = \frac{4}{6} \; ; \quad \frac{1}{6}$$

Subtract

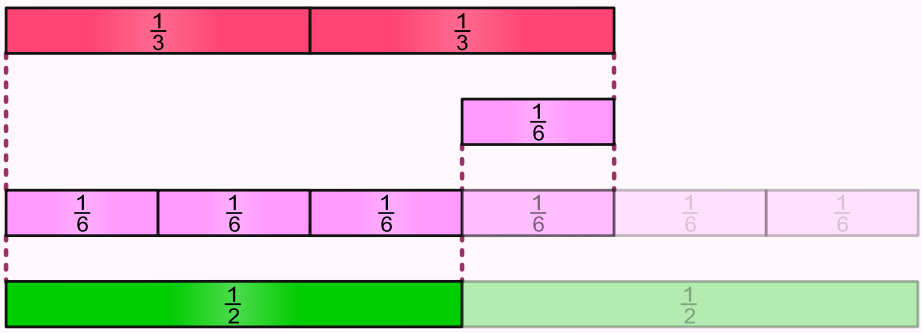
$$\frac{4}{6} - \frac{1}{6} = \frac{3}{6}$$

Simplify?

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

Result

$$\frac{2}{3} - \frac{1}{6} = \frac{2 \times 2}{3 \times 2} - \frac{1}{6} = \frac{4}{6} - \frac{1}{6} = \frac{3}{6} = \frac{3 \div 3}{6 \div 3} = \frac{1}{2}$$



Exercise 21 – Level 1

Goal

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

Simplify?

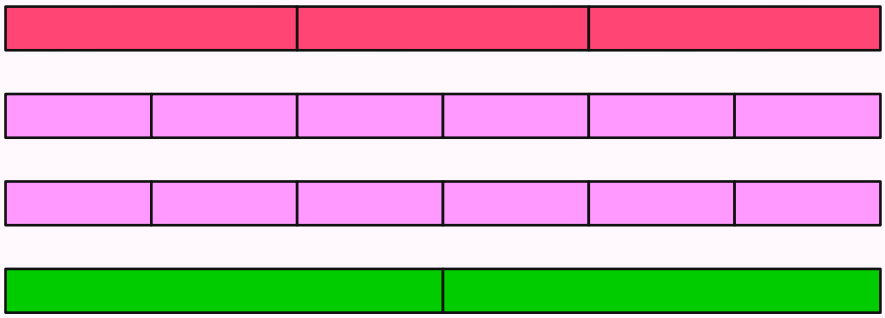
$\frac{2}{3} =$ $\frac{1}{6} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 21 – Level 2

Goal

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

Simplify?

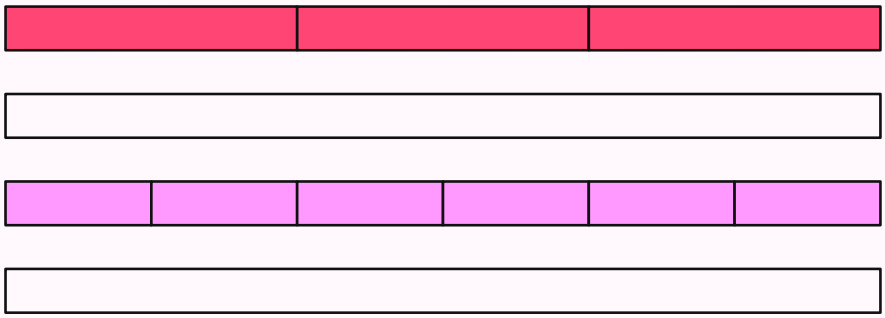
$\frac{2}{3} =$ $\frac{1}{6} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 21 – Level 3

Goal

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

Simplify?

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

Least Common Denominator

Subtract

Simplify?

Result

Exercise 22 – Solution

Goal

We want to subtract $\frac{4}{24}$ from $\frac{14}{20}$,
that is, we want to calculate $\frac{14}{20} - \frac{4}{24}$.

Simplify?

$$\frac{14}{20} = \frac{14 \div 2}{20 \div 2} = \frac{7}{10} \quad ; \quad \frac{4}{24} = \frac{4 \div 4}{24 \div 4} = \frac{1}{6}$$

Least Common Denominator

$$\frac{7}{10} = \frac{7 \times 3}{10 \times 3} = \frac{21}{30} \; ; \; \frac{1}{6} = \frac{1 \times 5}{6 \times 5} = \frac{5}{30}$$

Subtract

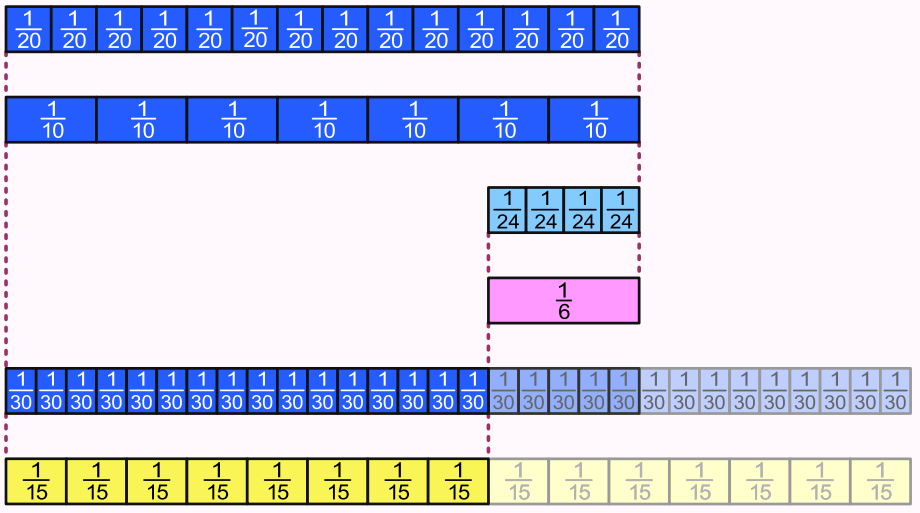
$$\frac{21}{30} - \frac{5}{30} = \frac{16}{30}$$

Simplify?

$$\frac{16}{30} = \frac{16 \div 2}{30 \div 2} = \frac{8}{15}$$

Result

$$\frac{14}{20} - \frac{4}{24} = \frac{14 \div 2}{20 \div 2} - \frac{4 \div 4}{24 \div 4} = \frac{7}{10} - \frac{1}{6} = \frac{7 \times 3}{10 \times 3} - \frac{1 \times 5}{6 \times 5} = \frac{21}{30} - \frac{5}{30} = \frac{16}{30} = \frac{16 \div 2}{30 \div 2} = \frac{8}{15}$$



Exercise 22 – Level 1

Goal

$$\frac{14}{20} - \frac{4}{24}$$

Simplify?

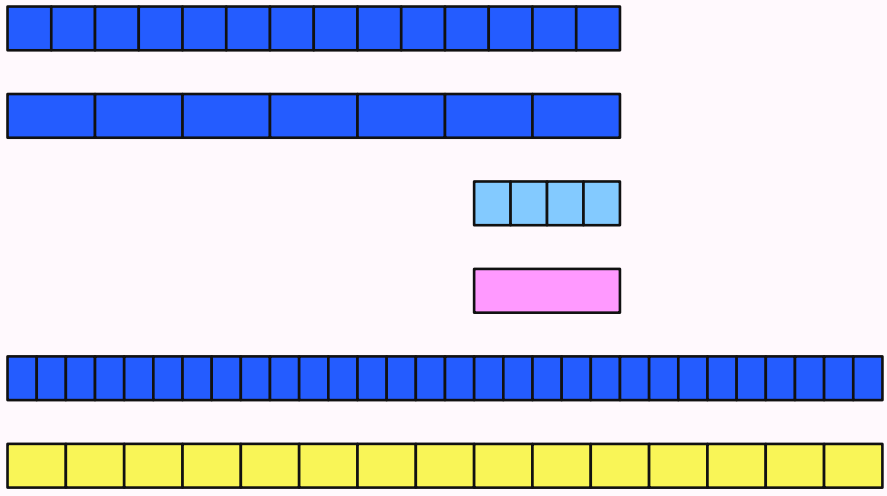
$\frac{14}{20} =$ $\frac{4}{24} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 22 – Level 2

Goal

$$\frac{14}{20} - \frac{4}{24}$$

Simplify?

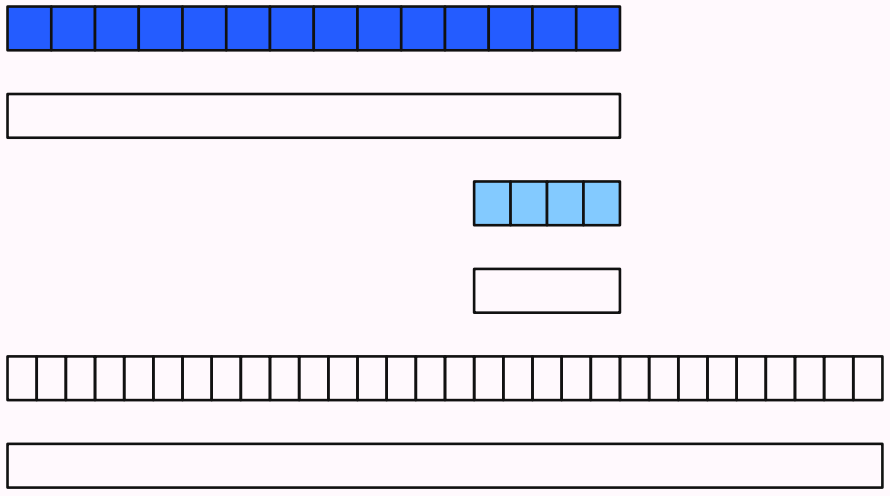
$\frac{14}{20} =$ $\frac{4}{24} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 22 – Level 3

Goal

$$\frac{14}{20} - \frac{4}{24}$$

Simplify?

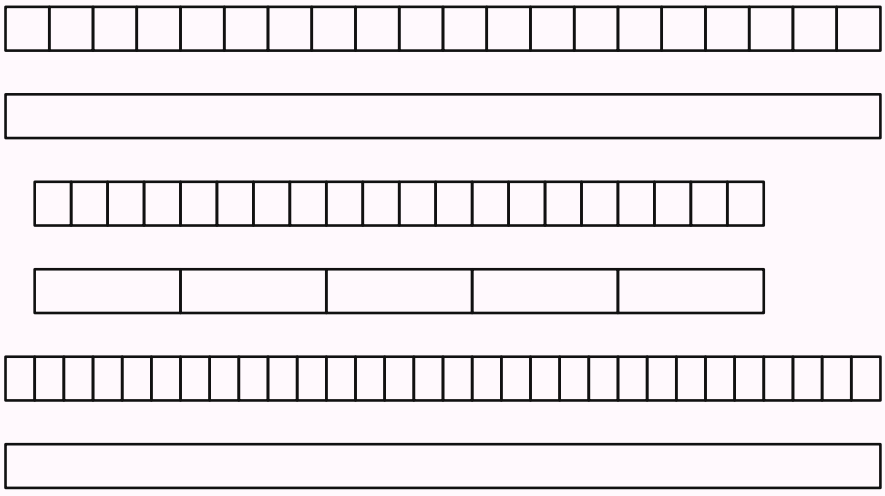
$\frac{14}{20} =$ $\frac{4}{24} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 23 – Solution

Goal

We want to subtract $\frac{6}{15}$ from $\frac{18}{20}$,
that is, we want to calculate $\frac{18}{20} - \frac{6}{15}$.

Simplify?

$$\frac{18}{20} = \frac{18 \div 2}{20 \div 2} = \frac{9}{10} \quad ; \quad \frac{6}{15} = \frac{6 \div 3}{15 \div 3} = \frac{2}{5}$$

Least Common Denominator

$$\frac{9}{10} \; ; \; \frac{2}{5} = \frac{2 \times 2}{5 \times 2} = \frac{4}{10}$$

Subtract

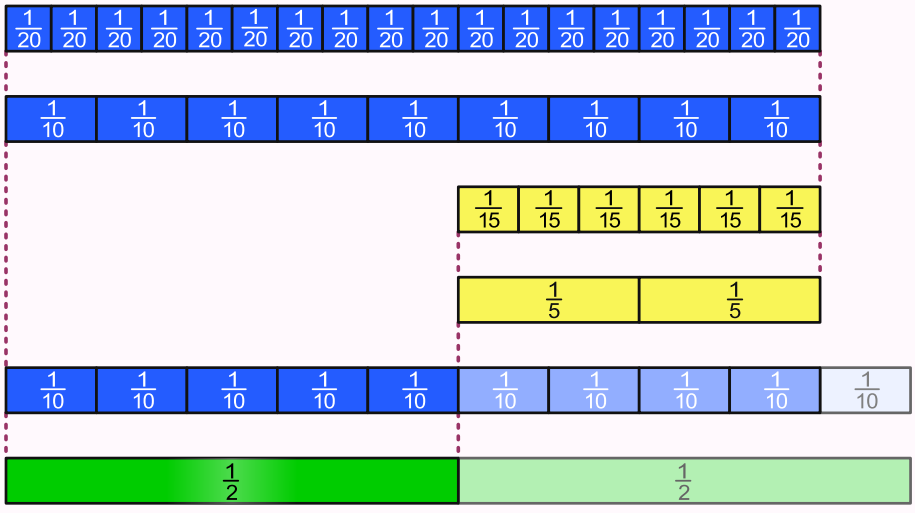
$$\frac{9}{10} - \frac{4}{10} = \frac{5}{10}$$

Simplify?

$$\frac{5}{10} = \frac{5 \div 5}{10 \div 5} = \frac{1}{2}$$

Result

$$\frac{18}{20} - \frac{6}{15} = \frac{18 \div 2}{20 \div 2} - \frac{6 \div 3}{15 \div 3} = \frac{9}{10} - \frac{2}{5} = \frac{9}{10} - \frac{2 \times 2}{5 \times 2} = \frac{9}{10} - \frac{4}{10} = \frac{5}{10} = \frac{5 \div 5}{10 \div 5} = \frac{1}{2}$$



Exercise 23 – Level 1

Goal

$$\frac{18}{20} - \frac{6}{15}$$

Simplify?

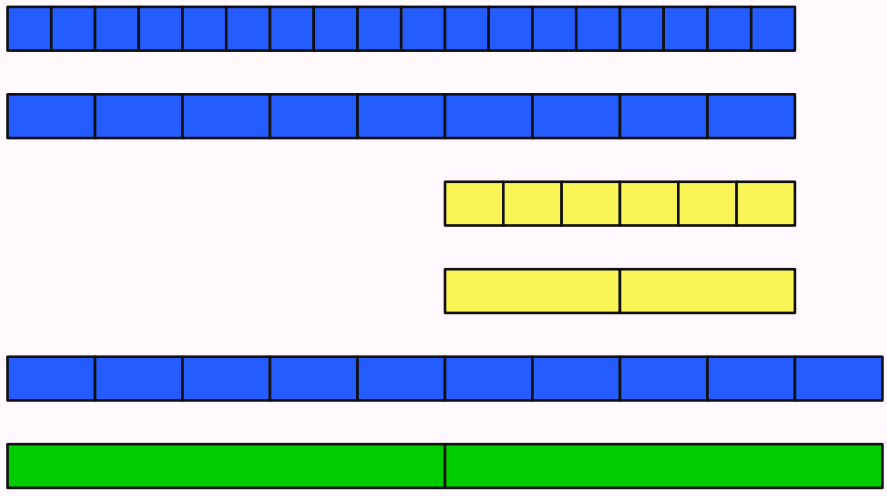
$\frac{18}{20} =$ $\frac{6}{15} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 23 – Level 2

Goal

$$\frac{18}{20} - \frac{6}{15}$$

Simplify?

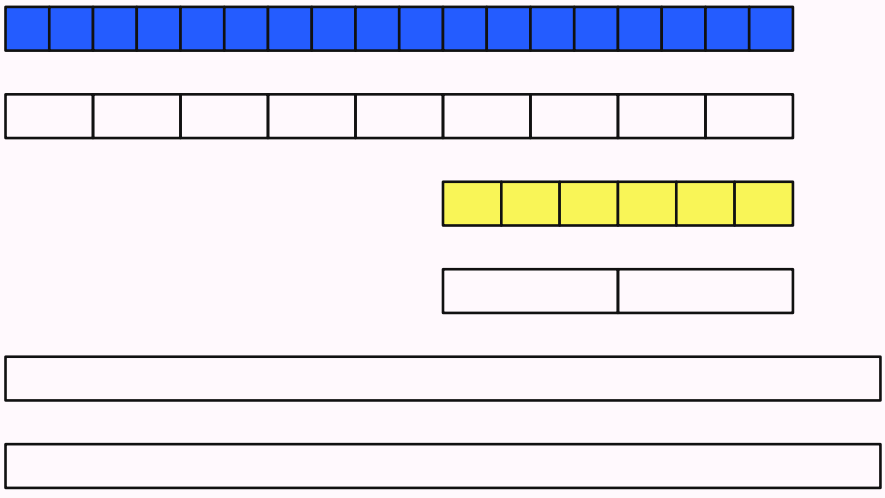
$\frac{18}{20} =$ $\frac{6}{15} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 23 – Level 3

Goal

$$\frac{18}{20} - \frac{6}{15}$$

Simplify?

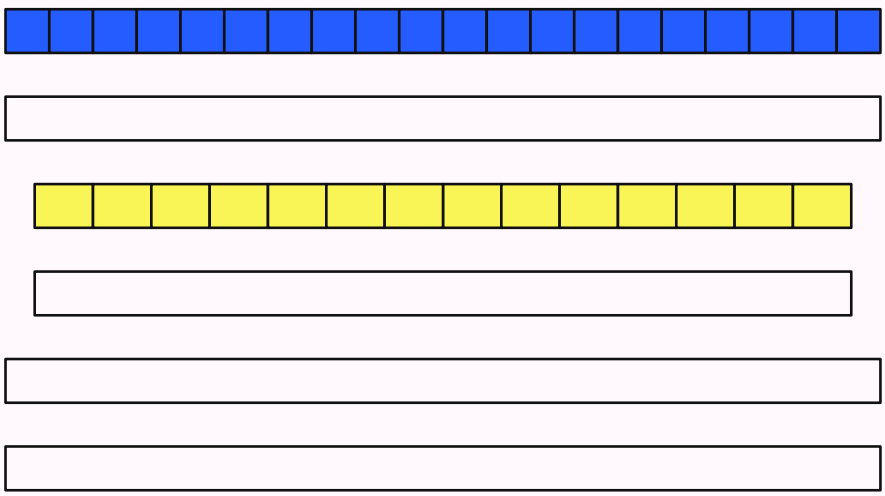
$\frac{18}{20} =$ $\frac{6}{15} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 24 – Solution

Goal

We want to subtract $\frac{11}{20}$ from $\frac{22}{24}$,
that is, we want to calculate $\frac{22}{24} - \frac{11}{20}$.

Simplify?

$$\frac{22}{24} = \frac{22 \div 2}{24 \div 2} = \frac{11}{12} \quad ; \quad \frac{11}{20}$$

Least Common Denominator

$$\frac{11}{12} = \frac{11 \times 5}{12 \times 5} = \frac{55}{60} \quad ; \quad \frac{11}{20} = \frac{11 \times 3}{20 \times 3} = \frac{33}{60}$$

Subtract

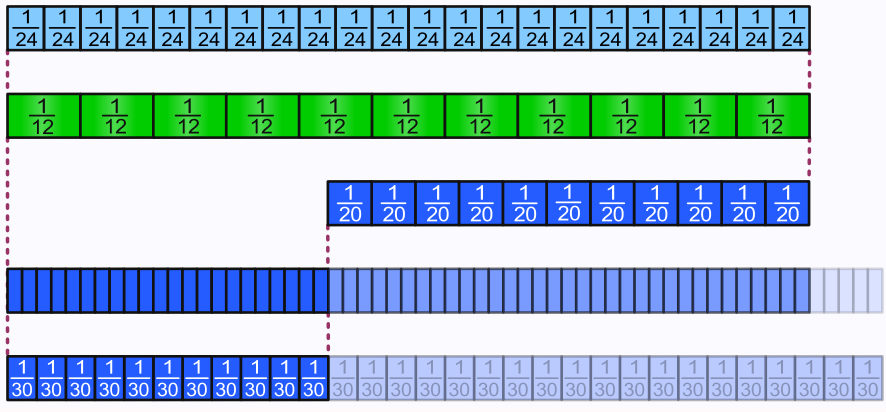
$$\frac{55}{60} - \frac{33}{60} = \frac{22}{60}$$

Simplify?

$$\frac{22}{60} = \frac{22 \div 2}{60 \div 2} = \frac{11}{30}$$

Result

$$\frac{22}{24} - \frac{11}{20} = \frac{22 \div 2}{24 \div 2} - \frac{11}{20} = \frac{11}{12} - \frac{11}{20} = \frac{11 \times 5}{12 \times 5} - \frac{11 \times 3}{20 \times 3} = \frac{55}{60} - \frac{33}{60} = \frac{22}{60} = \frac{22 \div 2}{60 \div 2} = \frac{11}{30}$$



Exercise 24 – Level 1

Goal

$$\frac{22}{24} - \frac{11}{20}$$

Simplify?

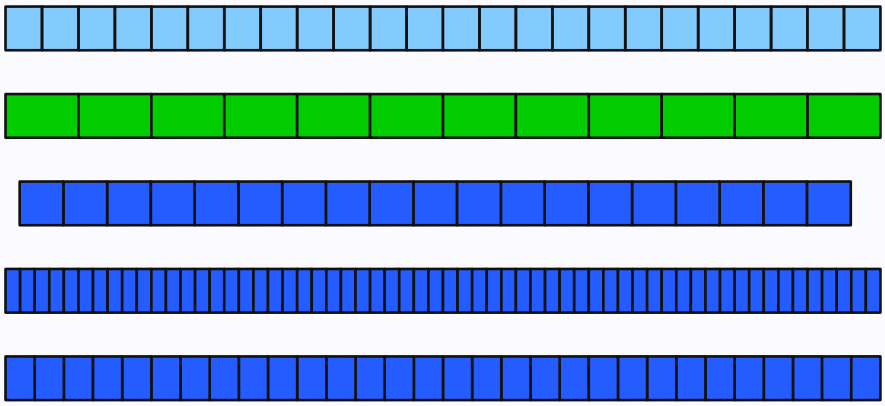
$\frac{22}{24} =$ $\frac{11}{20} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 24 – Level 2

Goal

$$\frac{22}{24} - \frac{11}{20}$$

Simplify?

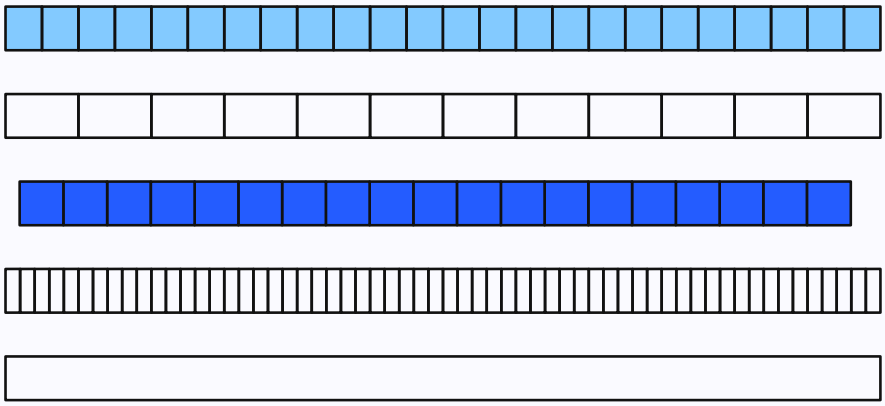
$\frac{22}{24} =$ $\frac{11}{20} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 24 – Level 3

Goal

$$\frac{22}{24} - \frac{11}{20}$$

Simplify?

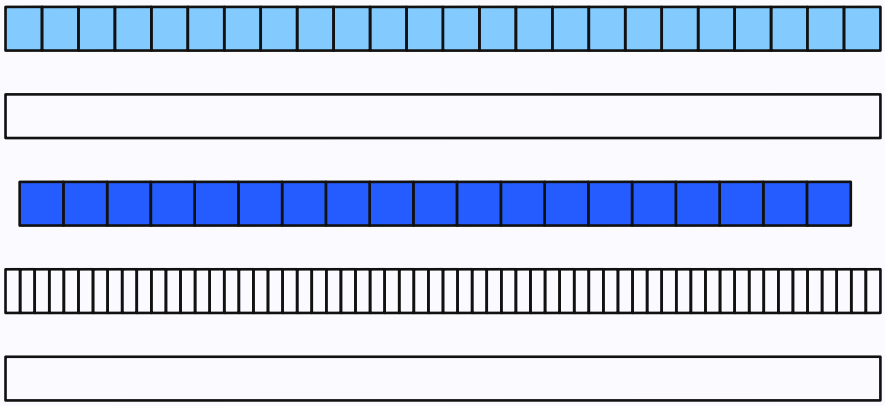
$\frac{22}{24} =$ $\frac{11}{20} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 25 – Solution

Goal

We want to subtract $\frac{5}{25}$ from $\frac{28}{40}$,
that is, we want to calculate $\frac{28}{40} - \frac{5}{25}$.

Simplify?

$$\frac{28}{40} = \frac{28 \div 4}{40 \div 4} = \frac{7}{10} \quad ; \quad \frac{5}{25} = \frac{5 \div 5}{25 \div 5} = \frac{1}{25}$$

Least Common Denominator

$$\frac{7}{10} \; ; \; \frac{1}{5} = \frac{1 \times 2}{5 \times 2} = \frac{2}{5}$$

Subtract

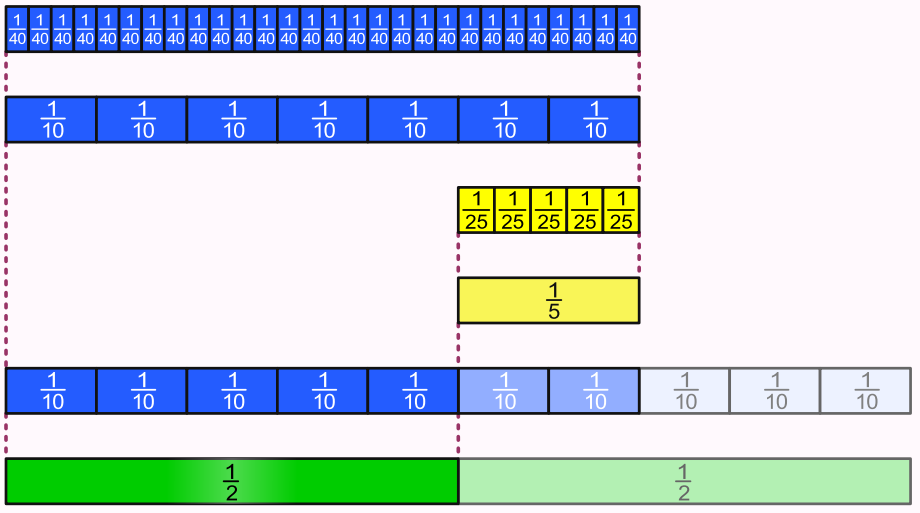
$$\frac{7}{10} - \frac{2}{10} = \frac{5}{10}$$

Simplify?

$$\frac{5}{10} = \frac{5 \div 5}{10 \div 5} = \frac{1}{2}$$

Result

$$\frac{28}{40} - \frac{5}{25} = \frac{28 \div 4}{40 \div 4} - \frac{5 \div 5}{25 \div 5} = \frac{7}{10} - \frac{1}{5} = \frac{7}{10} - \frac{1 \times 2}{5 \times 2} = \frac{7}{10} - \frac{2}{10} = \frac{5}{10} = \frac{5 \div 5}{10 \div 5} = \frac{1}{2}$$



Exercise 25 – Level 1

Goal

$$\frac{28}{40} - \frac{5}{25}$$

Simplify?

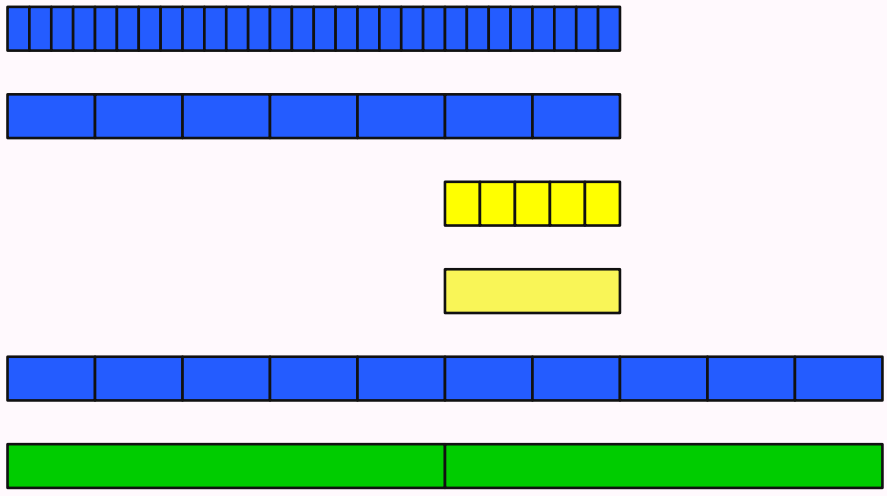
$\frac{28}{40} =$ $\frac{5}{25} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 25 – Level 2

Goal

$$\frac{28}{40} - \frac{5}{25}$$

Simplify?

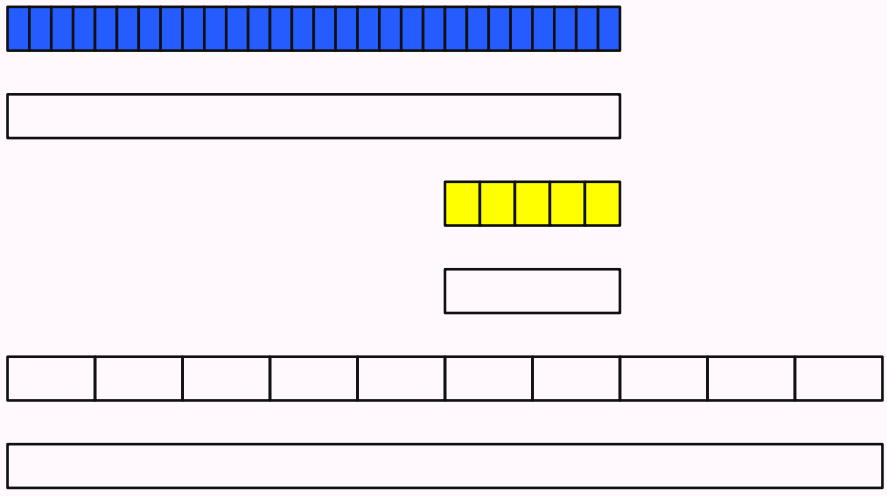
$\frac{28}{40} =$ $\frac{5}{25} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 25 – Level 3

Goal

$$\frac{28}{40} - \frac{5}{25}$$

Simplify?

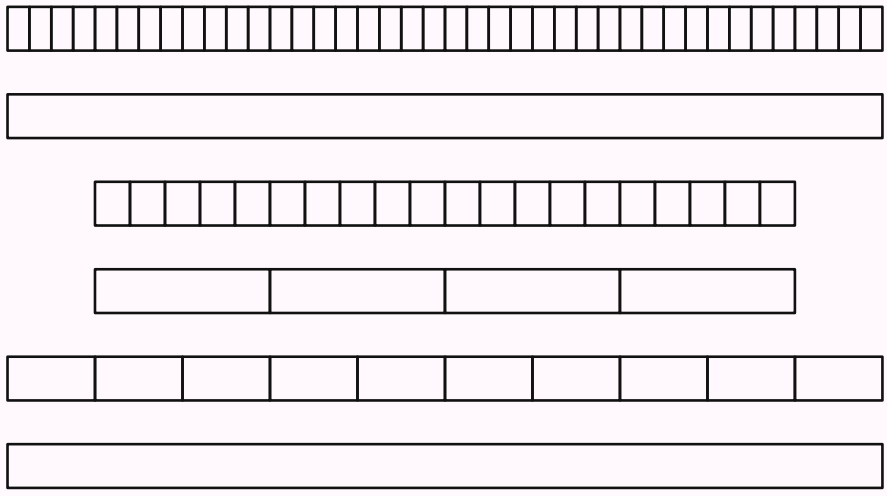
$\frac{28}{40} =$ $\frac{5}{25} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 26 – Solution

Goal

We want to subtract $\frac{15}{36}$ from $\frac{12}{16}$,
that is, we want to calculate $\frac{12}{16} - \frac{15}{36}$.

Simplify?

$$\frac{12}{16} = \frac{12 \div 4}{16 \div 4} = \frac{3}{4} \quad ; \quad \frac{15}{36} = \frac{15 \div 3}{36 \div 3} = \frac{5}{12}$$

Least Common Denominator

$$\frac{3}{4} = \frac{3 \times 3}{4 \times 3} = \frac{9}{12} \quad ; \quad \frac{5}{12}$$

Subtract

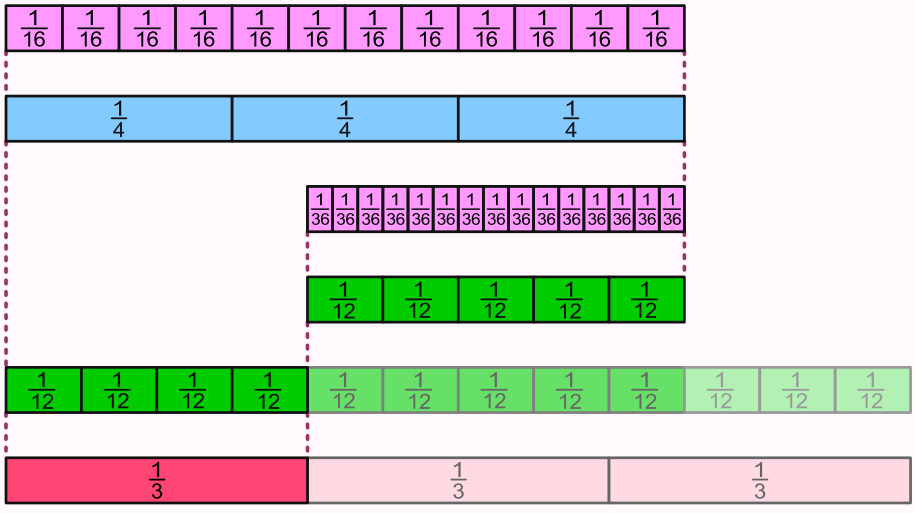
$$\frac{9}{12} - \frac{5}{12} = \frac{4}{12}$$

Simplify?

$$\frac{4}{12} = \frac{4 \div 4}{12 \div 4} = \frac{1}{3}$$

Result

$$\frac{12}{16} - \frac{15}{36} = \frac{12 \div 4}{16 \div 4} - \frac{15 \div 3}{36 \div 3} = \frac{3}{4} - \frac{5}{12} = \frac{3 \times 3}{4 \times 3} - \frac{5}{12} = \frac{9}{12} - \frac{5}{12} = \frac{4}{12} = \frac{4 \div 4}{12 \div 4} = \frac{1}{3}$$



Exercise 26 – Level 1

Goal

$$\frac{12}{16} - \frac{15}{36}$$

Simplify?

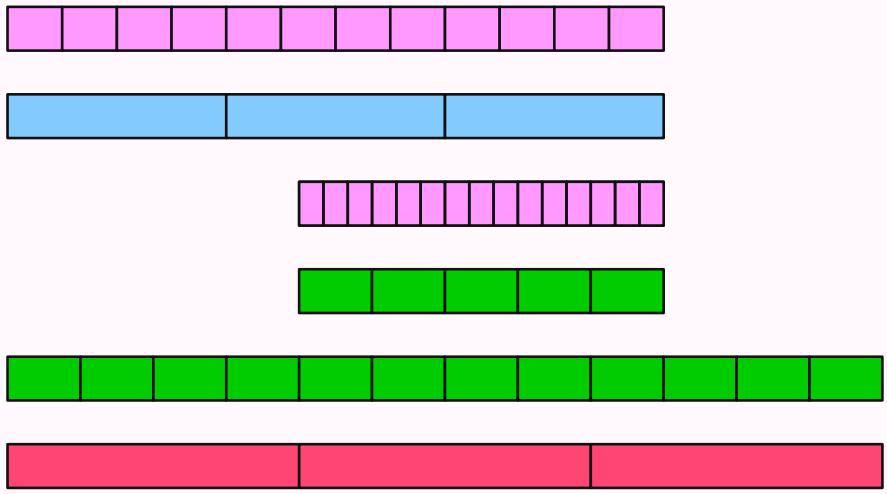
$\frac{12}{16} =$ $\frac{15}{36} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 26 – Level 2

Goal

$$\frac{12}{16} - \frac{15}{36}$$

Simplify?

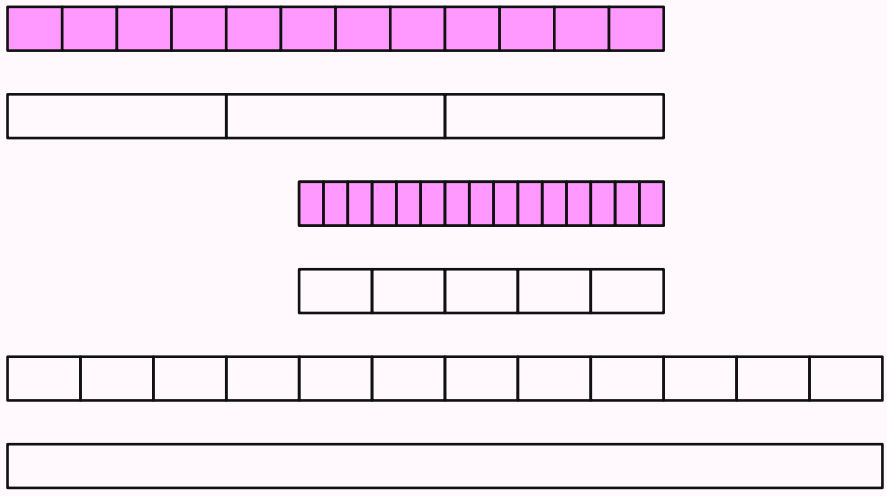
$\frac{12}{16} =$ $\frac{15}{36} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 26 – Level 3

Goal

$$\frac{12}{16} - \frac{15}{36}$$

Simplify?

$\frac{12}{16} =$ $\frac{15}{36} =$

Least Common Denominator

Subtract

Simplify?

Result

Exercise 27 – Solution

Goal

We want to subtract $\frac{10}{12}$ from $\frac{17}{18}$,
that is, we want to calculate $\frac{17}{18} - \frac{10}{12}$.

Simplify?

$$\frac{17}{18} \quad ; \quad \frac{10}{12} = \frac{10 \div 2}{12 \div 2} = \frac{5}{6}$$

Least Common Denominator

$$\frac{17}{18} \; ; \; \frac{5}{6} = \frac{5 \times 3}{6 \times 3} = \frac{15}{18}$$

Subtract

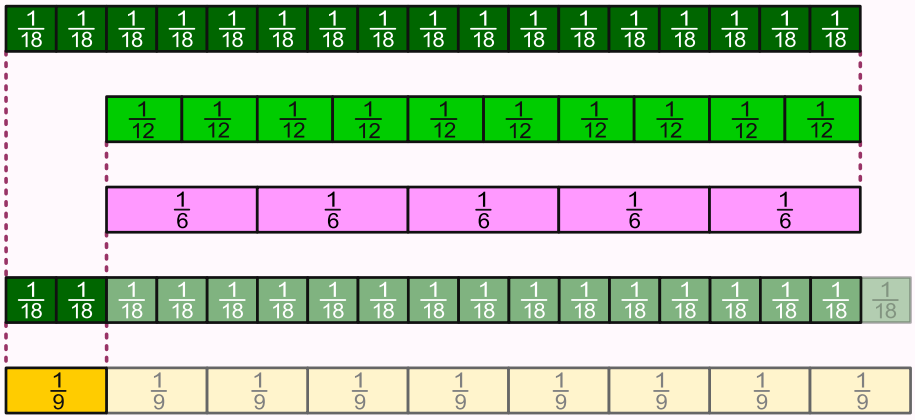
$$\frac{17}{18} - \frac{15}{18} = \frac{2}{18}$$

Simplify?

$$\frac{2}{18} = \frac{2 \div 2}{18 \div 2} = \frac{1}{9}$$

Result

$$\frac{17}{18} - \frac{10}{12} = \frac{17}{18} - \frac{10 \div 2}{12 \div 2} = \frac{17}{18} - \frac{5}{6} = \frac{17}{18} - \frac{5 \times 3}{6 \times 3} = \frac{17}{18} - \frac{15}{18} = \frac{2}{18} = \frac{2 \div 2}{18 \div 2} = \frac{1}{9}$$



Exercise 27 – Level 1

Goal

$$\frac{17}{18} - \frac{10}{12}$$

Simplify?

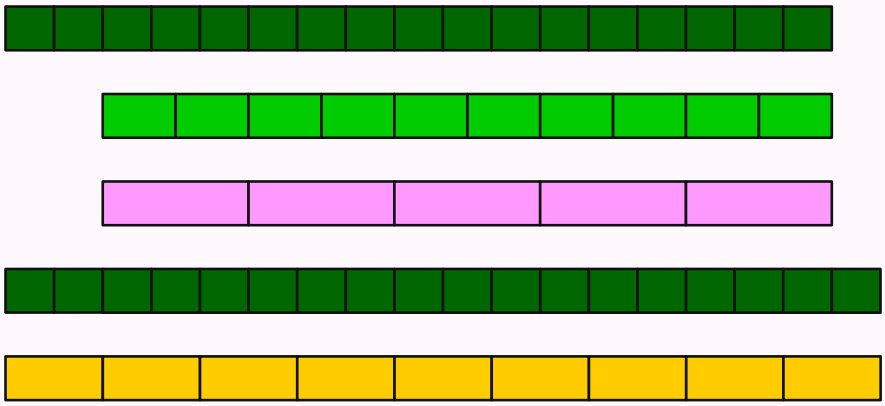
$\frac{17}{18} =$ $\frac{10}{12} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 27 – Level 2

Goal

$$\frac{17}{18} - \frac{10}{12}$$

Simplify?

$\frac{17}{18} =$ $\frac{10}{12} =$

Least Common Denominator

Subtract

Simplify?

Result

Exercise 27 – Level 3

Goal

$$\frac{17}{18} - \frac{10}{12}$$

Simplify?

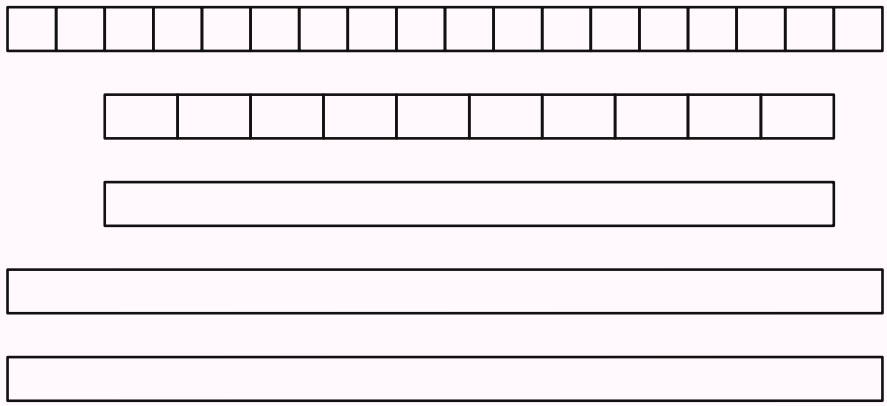
$\frac{17}{18} =$ $\frac{10}{12} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 28 – Solution

Goal

We want to subtract $\frac{2}{20}$ from $\frac{11}{22}$,
that is, we want to calculate $\frac{11}{22} - \frac{2}{20}$.

Simplify?

$$\frac{11}{22} = \frac{11 \div 11}{22 \div 11} = \frac{1}{2} \quad ; \quad \frac{2}{20} = \frac{2 \div 2}{20 \div 2} = \frac{1}{10}$$

Least Common Denominator

$$\frac{1}{2} = \frac{1 \times 5}{2 \times 5} = \frac{5}{10} \; ; \; \frac{1}{10}$$

Subtract

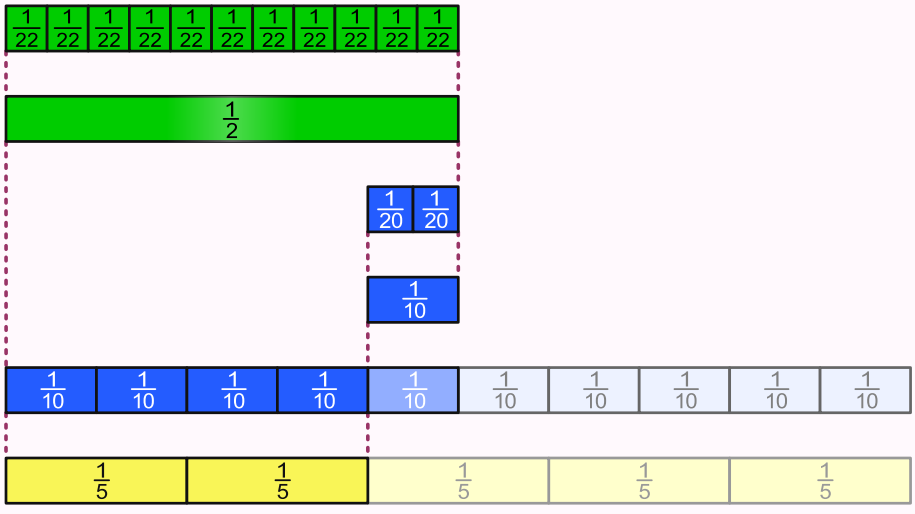
$$\frac{5}{10} - \frac{1}{10} = \frac{4}{10}$$

Simplify?

$$\frac{4}{10} = \frac{4 \div 2}{10 \div 2} = \frac{2}{5}$$

Result

$$\frac{11}{22} - \frac{2}{20} = \frac{11 \div 11}{22 \div 11} - \frac{2 \div 2}{20 \div 2} = \frac{1}{2} - \frac{1}{10} = \frac{1 \times 5}{2 \times 5} - \frac{1}{10} = \frac{5}{10} - \frac{1}{10} = \frac{4}{10} = \frac{4 \div 2}{10 \div 2} = \frac{2}{5}$$



Exercise 28 – Level 1

Goal

$$\frac{11}{22} - \frac{2}{20}$$

Simplify?

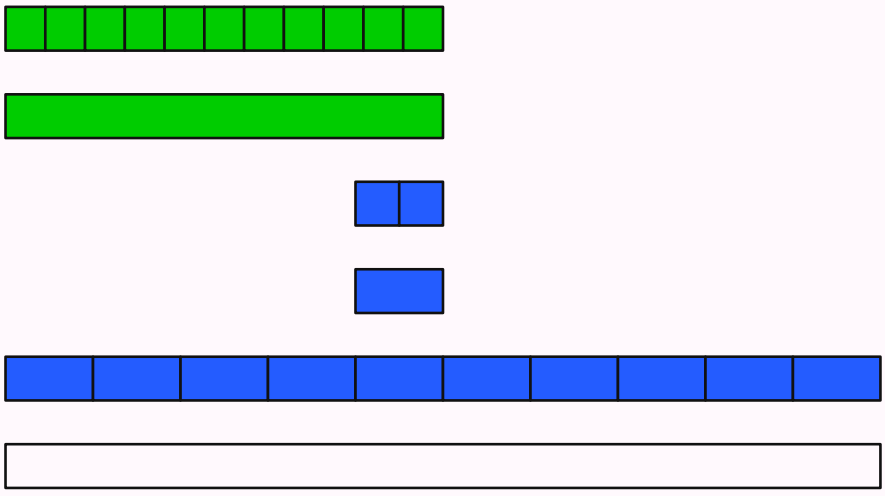
$\frac{11}{22} =$ $\frac{2}{20} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 28 – Level 2

Goal

$$\frac{11}{22} - \frac{2}{20}$$

Simplify?

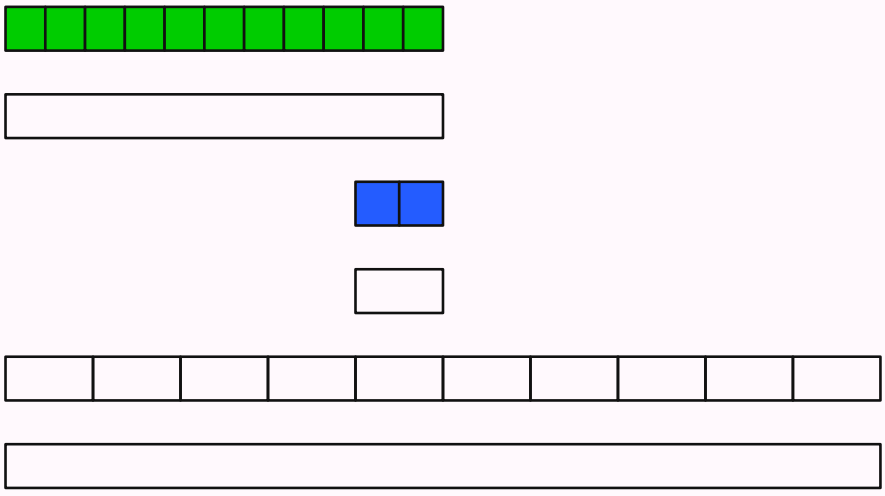
$\frac{11}{22} =$ $\frac{2}{20} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 28 – Level 3

Goal

$$\frac{11}{22} - \frac{2}{20}$$

Simplify?

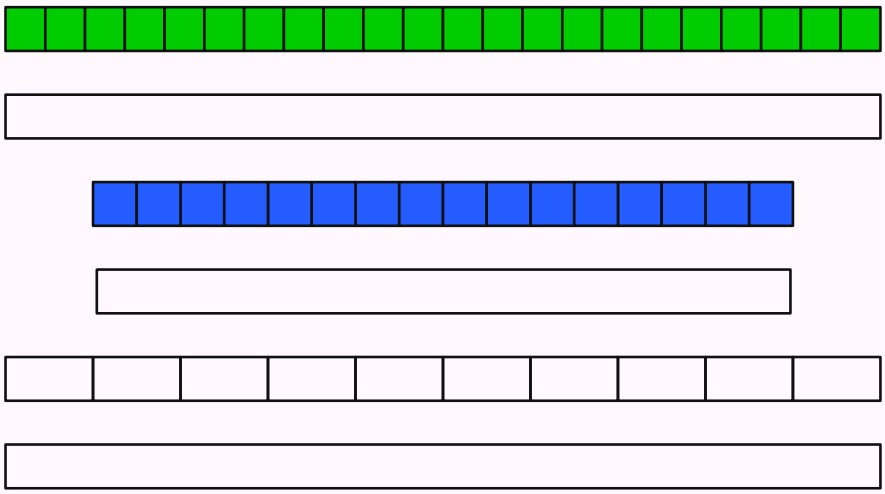
$\frac{11}{22} =$ $\frac{2}{20} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 29 – Solution

Goal

We want to subtract $\frac{13}{20}$ from $\frac{27}{30}$,
that is, we want to calculate $\frac{27}{30} - \frac{13}{20}$.

Simplify?

$$\frac{27}{30} = \frac{27 \div 3}{30 \div 3} = \frac{9}{10} \quad ; \quad \frac{13}{20}$$

Least Common Denominator

$$\frac{9}{10} = \frac{9 \times 2}{10 \times 2} = \frac{18}{20} \; ; \; \frac{13}{20}$$

Subtract

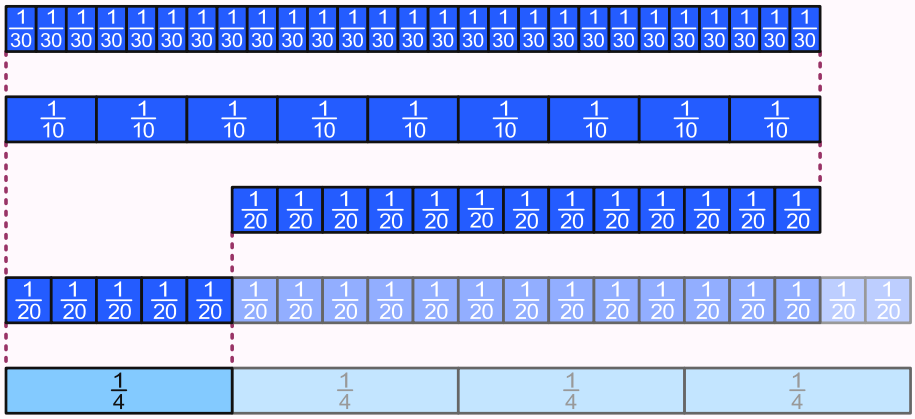
$$\frac{18}{20} - \frac{13}{20} = \frac{5}{20}$$

Simplify?

$$\frac{5}{20} = \frac{5 \div 5}{20 \div 5} = \frac{1}{4}$$

Result

$$\frac{27}{30} - \frac{13}{20} = \frac{27 \div 3}{30 \div 3} - \frac{13}{20} = \frac{9}{10} - \frac{13}{20} = \frac{9 \times 2}{10 \times 2} - \frac{13}{20} = \frac{18}{20} - \frac{13}{20} = \frac{5}{20} = \frac{5 \div 5}{20 \div 5} = \frac{1}{4}$$



Exercise 29 – Level 1

Goal

$$\frac{27}{30} - \frac{13}{20}$$

Simplify?

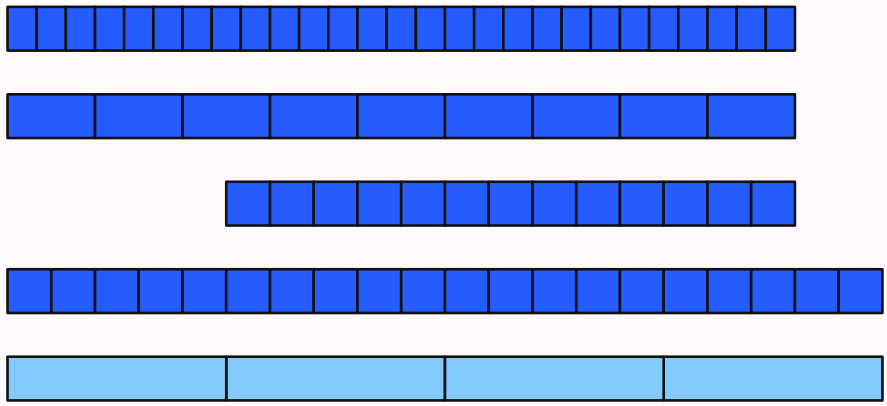
$\frac{27}{30} =$ $\frac{13}{20} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 29 – Level 2

Goal

$$\frac{27}{30} - \frac{13}{20}$$

Simplify?

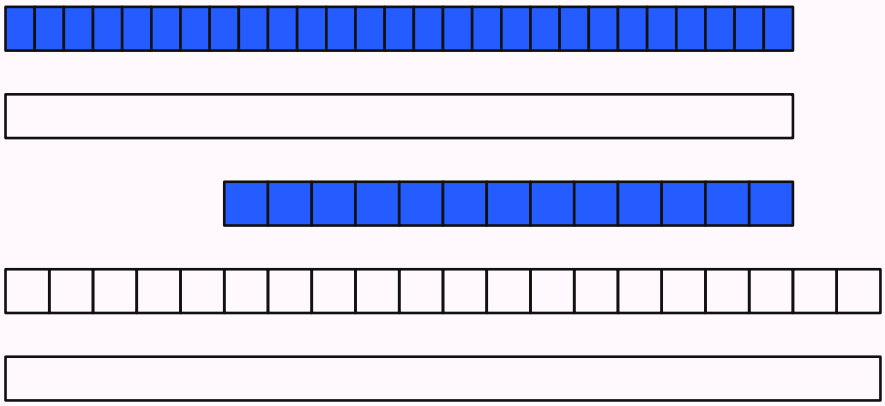
$\frac{27}{30} =$ $\frac{13}{20} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 29 – Level 3

Goal

$$\frac{27}{30} - \frac{13}{20}$$

Simplify?

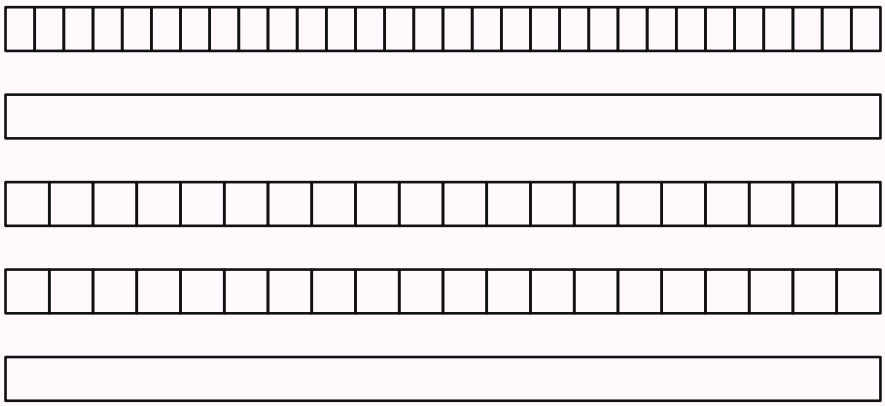
$\frac{27}{30} =$ $\frac{13}{20} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 30 – Solution

Goal

We want to subtract $\frac{8}{12}$ from $\frac{26}{30}$,
that is, we want to calculate $\frac{26}{30} - \frac{8}{12}$.

Simplify?

$$\frac{26}{30} = \frac{26 \div 2}{30 \div 2} = \frac{13}{15} \quad ; \quad \frac{8}{12} = \frac{8 \div 4}{12 \div 4} = \frac{2}{3}$$

Least Common Denominator

$$\frac{13}{15} \; ; \; \frac{2}{3} = \frac{2 \times 5}{3 \times 5} = \frac{10}{15}$$

Subtract

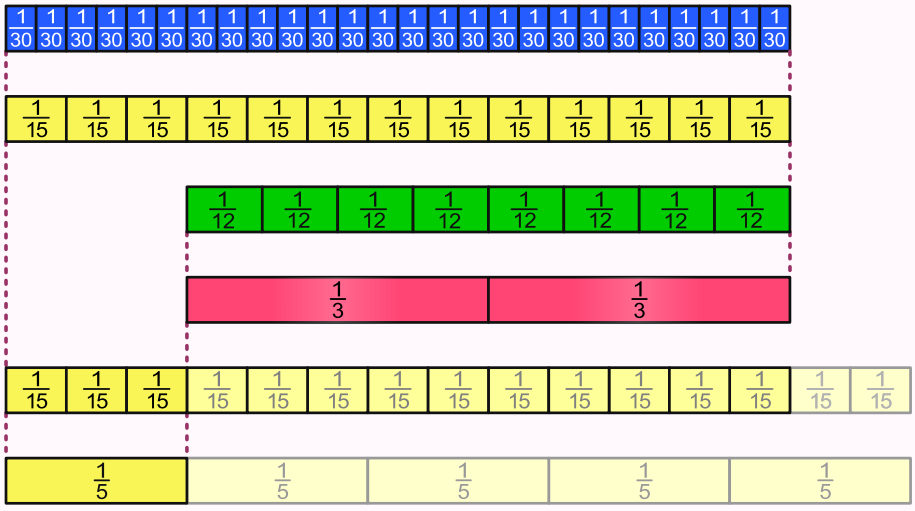
$$\frac{13}{15} - \frac{10}{15} = \frac{3}{15}$$

Simplify?

$$\frac{3}{15} = \frac{3 \div 3}{15 \div 3} = \frac{1}{15}$$

Result

$$\frac{26}{30} - \frac{8}{12} = \frac{26 \div 2}{30 \div 2} - \frac{8 \div 4}{12 \div 4} = \frac{13}{15} - \frac{2}{3} = \frac{13}{15} - \frac{2 \times 5}{3 \times 5} = \frac{13}{15} - \frac{10}{15} = \frac{3}{15} = \frac{3 \div 3}{15 \div 3} = \frac{1}{5}$$



Exercise 30 – Level 1

Goal

$$\frac{26}{30} - \frac{8}{12}$$

Simplify?

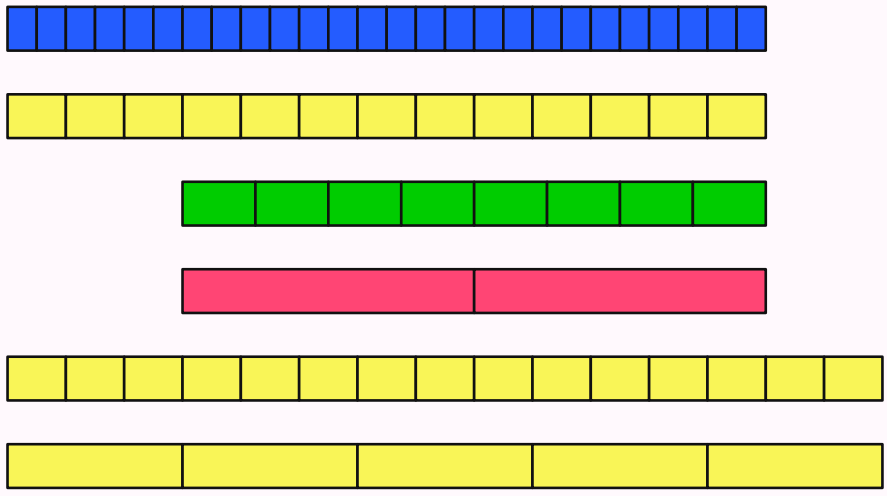
$\frac{26}{30} =$ $\frac{8}{12} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 30 – Level 2

Goal

$$\frac{26}{30} - \frac{8}{12}$$

Simplify?

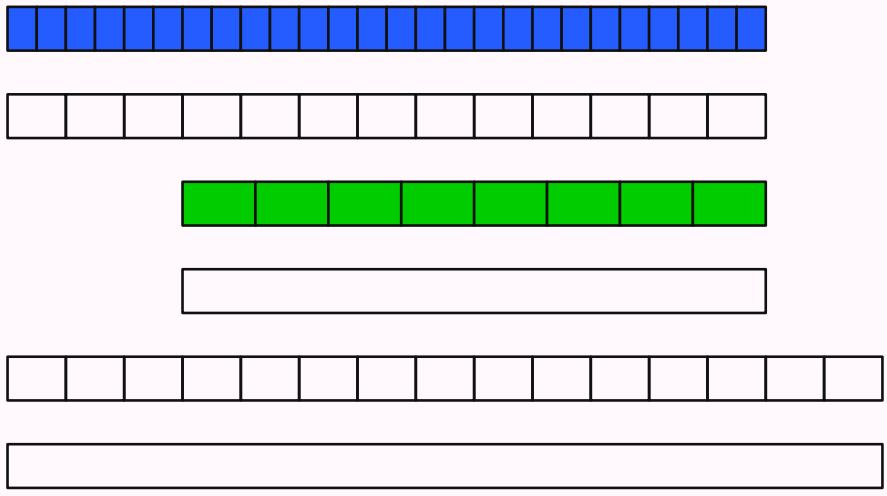
$\frac{26}{30} =$ $\frac{8}{12} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 30 – Level 3

Goal

$$\frac{26}{30} - \frac{8}{12}$$

Simplify?

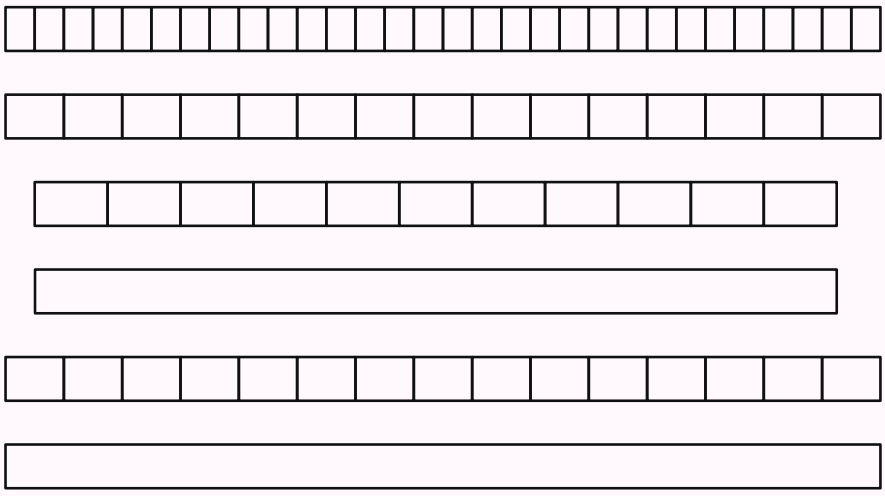
$\frac{26}{30} =$ $\frac{8}{12} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 31 – Solution

Goal

We want to subtract $\frac{2}{42}$ from $\frac{25}{35}$,
that is, we want to calculate $\frac{25}{35} - \frac{2}{42}$.

Simplify?

$$\frac{25}{35} = \frac{25 \div 5}{35 \div 5} = \frac{5}{7} \quad ; \quad \frac{2}{42} = \frac{2 \div 2}{42 \div 2} = \frac{1}{21}$$

Least Common Denominator

$$\frac{5}{7} = \frac{5 \times 3}{7 \times 3} = \frac{15}{21} \; ; \; \frac{1}{21}$$

Subtract

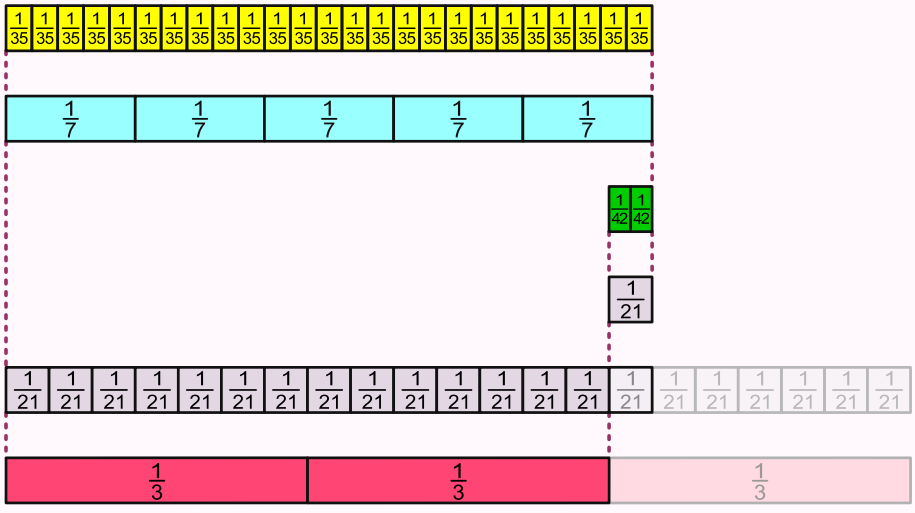
$$\frac{15}{21} - \frac{1}{21} = \frac{14}{21}$$

Simplify?

$$\frac{14}{21} = \frac{14 \div 7}{21 \div 7} = \frac{2}{3}$$

Result

$$\frac{25}{35} - \frac{2}{42} = \frac{25 \div 5}{35 \div 5} - \frac{2 \div 2}{42 \div 2} = \frac{5}{7} - \frac{1}{21} = \frac{5 \times 3}{7 \times 3} - \frac{1}{21} = \frac{15}{21} - \frac{1}{21} = \frac{14}{21} = \frac{14 \div 7}{21 \div 7} = \frac{2}{3}$$



Exercise 31 – Level 1

Goal

$$\frac{25}{35} - \frac{2}{42}$$

Simplify?

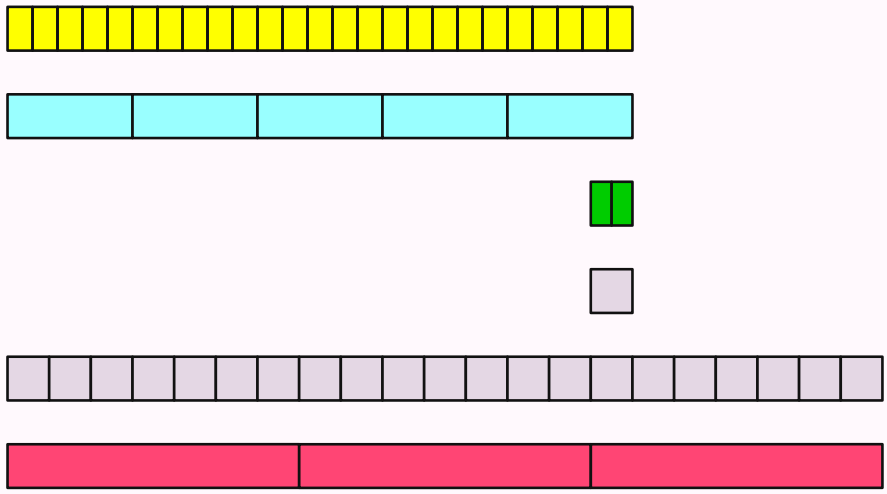
$\frac{25}{35} =$ $\frac{2}{42} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 31 – Level 2

Goal

$$\frac{25}{35} - \frac{2}{42}$$

Simplify?

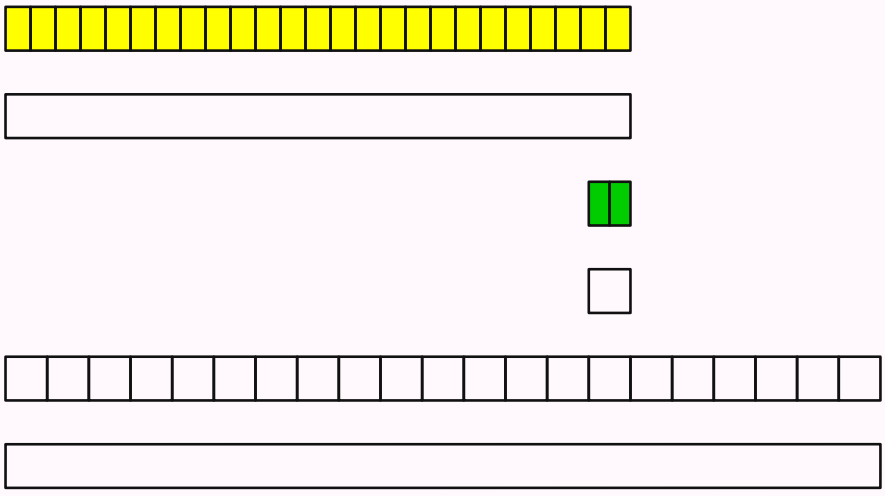
$\frac{25}{35} =$ $\frac{2}{42} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 31 – Level 3

Goal

$$\frac{25}{35} - \frac{2}{42}$$

Simplify?

$\frac{25}{35} =$ $\frac{2}{42} =$

Least Common Denominator

Subtract

Simplify?

Result

Exercise 32 – Solution

Goal

We want to subtract $\frac{20}{56}$ from $\frac{25}{30}$,
that is, we want to calculate $\frac{25}{30} - \frac{20}{56}$.

Simplify?

$$\frac{25}{30} = \frac{25 \div 5}{30 \div 5} = \frac{5}{6} \quad \text{und} \quad \frac{20}{56} = \frac{20 \div 4}{56 \div 4} = \frac{5}{14}$$

Least Common Denominator

$$\frac{5}{6} = \frac{5 \times 7}{6 \times 7} = \frac{35}{42}\,; \quad \frac{5}{14} = \frac{5 \times 3}{14 \times 3} = \frac{15}{42}$$

Subtract

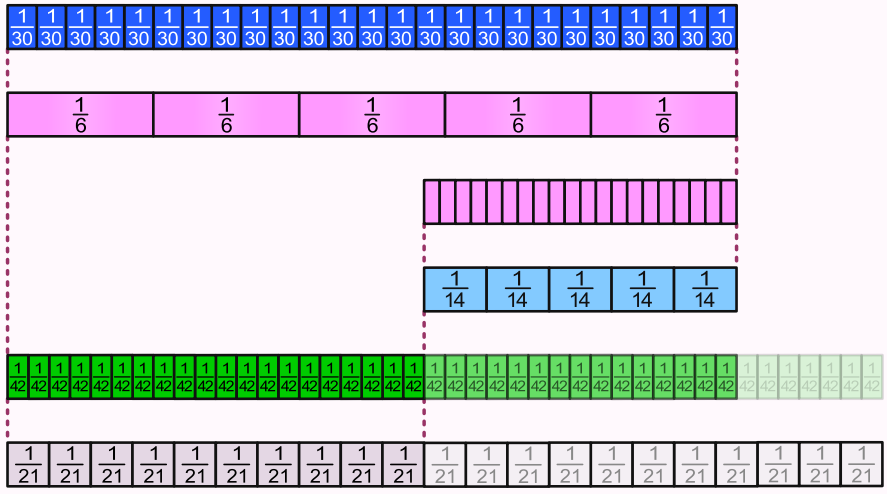
$$\frac{35}{42} - \frac{15}{42} = \frac{20}{42}$$

Simplify?

$$\frac{20}{42} = \frac{20 \div 2}{42 \div 2} = \frac{10}{21}$$

Result

$$\frac{25}{30} - \frac{20}{56} = \frac{25 \div 5}{30 \div 5} - \frac{20 \div 4}{56 \div 4} = \frac{5}{6} - \frac{5}{14} = \frac{5 \times 7}{6 \times 7} - \frac{5 \times 3}{14 \times 3} = \frac{35}{42} - \frac{15}{42} = \frac{20}{42} = \frac{20 \div 2}{42 \div 2} = \frac{10}{21}$$



Exercise 32 – Level 1

Goal

$$\frac{25}{30} - \frac{20}{56}$$

Simplify?

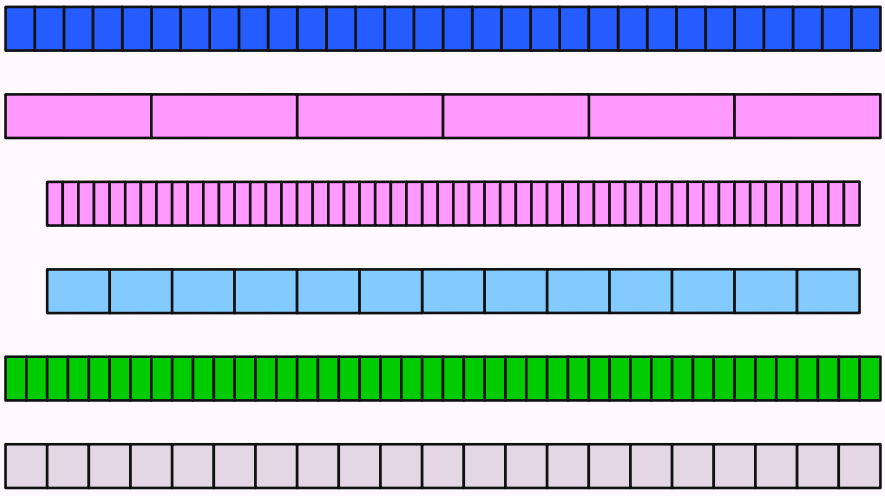
$\frac{25}{30} =$ $\frac{20}{56} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 32 – Level 2

Goal

$$\frac{25}{30} - \frac{20}{56}$$

Simplify?

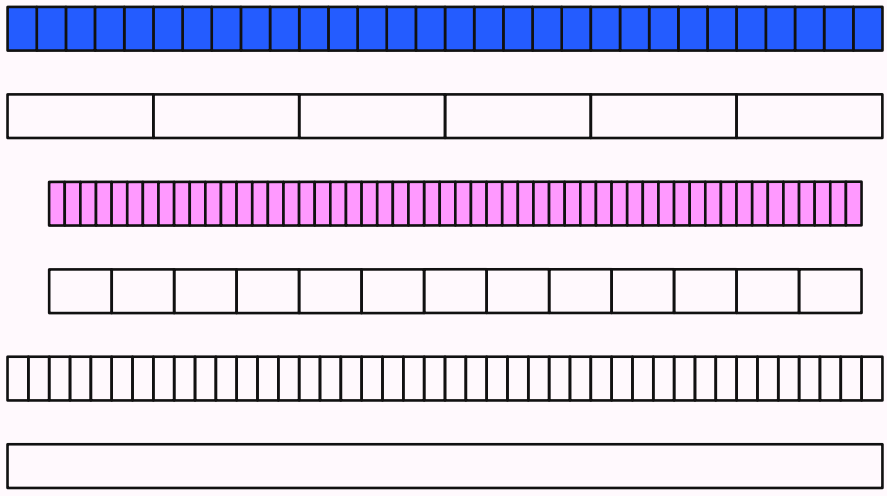
$\frac{25}{30} =$ $\frac{20}{56} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 32 – Level 3

Goal

$$\frac{25}{30} - \frac{20}{56}$$

Simplify?

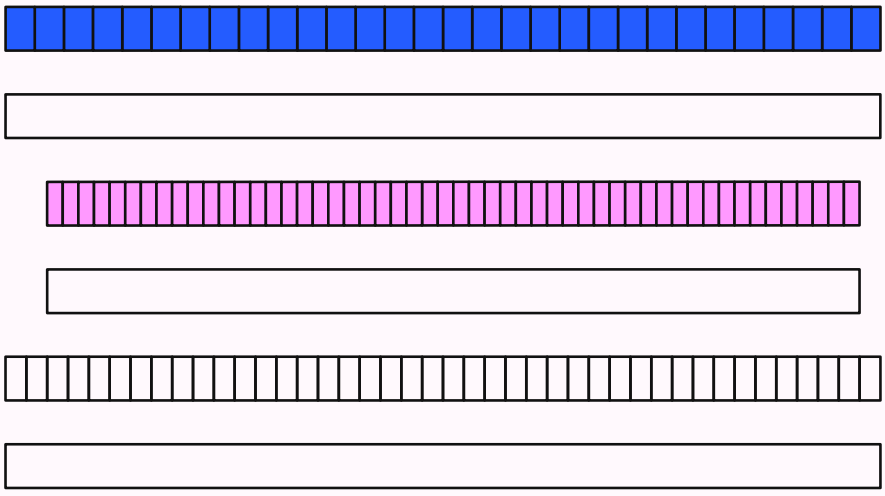
$\frac{25}{30} =$ $\frac{20}{56} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 33 – Solution

Goal

We want to subtract $\frac{2}{15}$ from $\frac{15}{50}$,
that is, we want to calculate $\frac{15}{50} - \frac{2}{15}$.

Simplify?

$$\frac{15}{50} = \frac{15 \div 5}{50 \div 5} = \frac{3}{10} \; ; \; \frac{2}{15}$$

Least Common Denominator

$$\frac{3}{10} = \frac{3 \times 3}{10 \times 3} = \frac{9}{30} \; ; \; \frac{2}{15} = \frac{2 \times 2}{15 \times 2} = \frac{4}{30}$$

Subtract

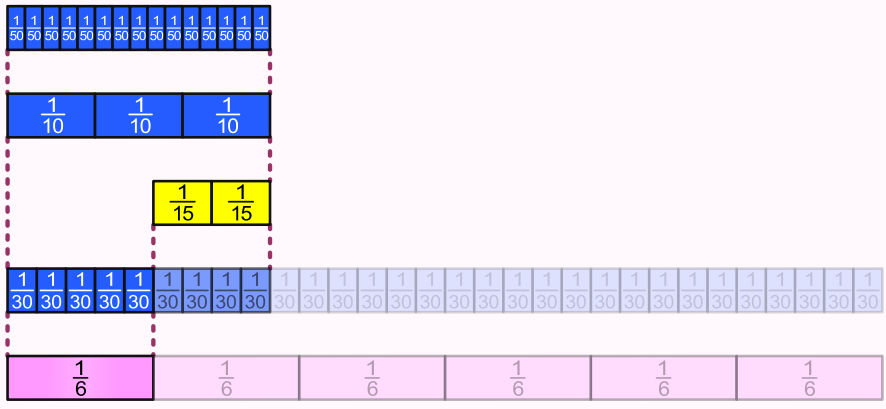
$$\frac{9}{30} - \frac{4}{30} = \frac{5}{30}$$

Simplify?

$$\frac{5}{30} = \frac{5 \div 5}{30 \div 5} = \frac{1}{6}$$

Result

$$\frac{15}{50} - \frac{2}{15} = \frac{15 \div 5}{50 \div 5} - \frac{2}{15} = \frac{3}{10} - \frac{2}{15} = \frac{3 \times 3}{10 \times 3} - \frac{2 \times 2}{15 \times 2} = \frac{9}{30} - \frac{4}{30} = \frac{5}{30} = \frac{5 \div 5}{30 \div 5} = \frac{1}{6}$$



Exercise 33 – Level 1

Goal

$$\frac{15}{50} - \frac{2}{15}$$

Simplify?

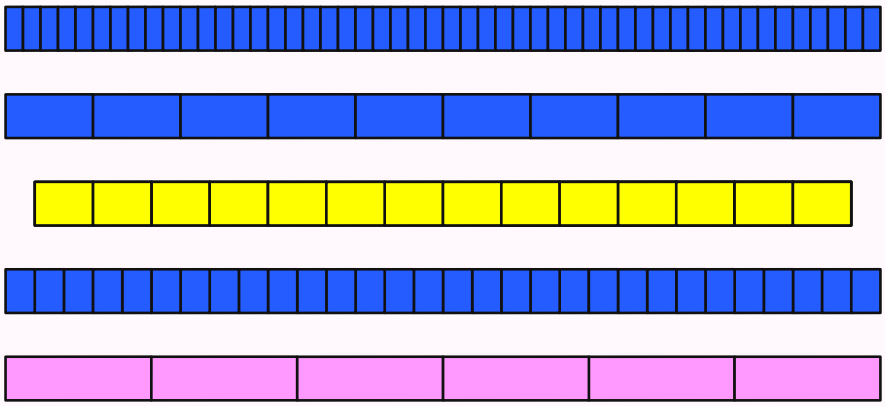
$\frac{15}{50} =$ $\frac{2}{15} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 33 – Level 2

Goal

$$\frac{15}{50} - \frac{2}{15}$$

Simplify?

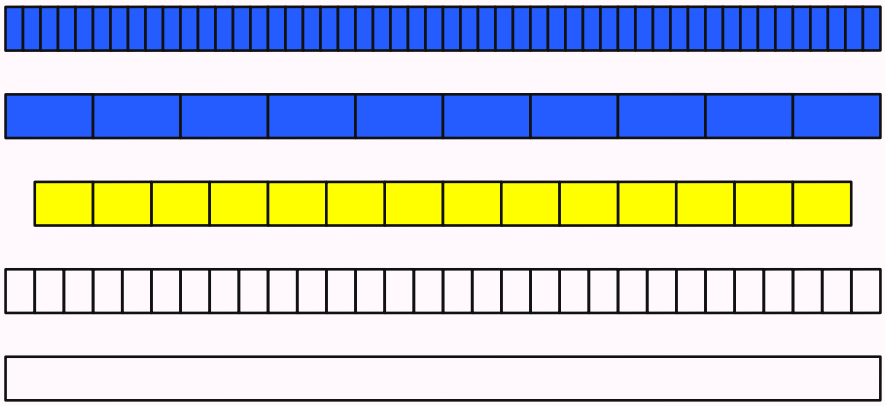
$\frac{15}{50} =$ $\frac{2}{15} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 33 – Level 3

Goal

$$\frac{15}{50} - \frac{2}{15}$$

Simplify?

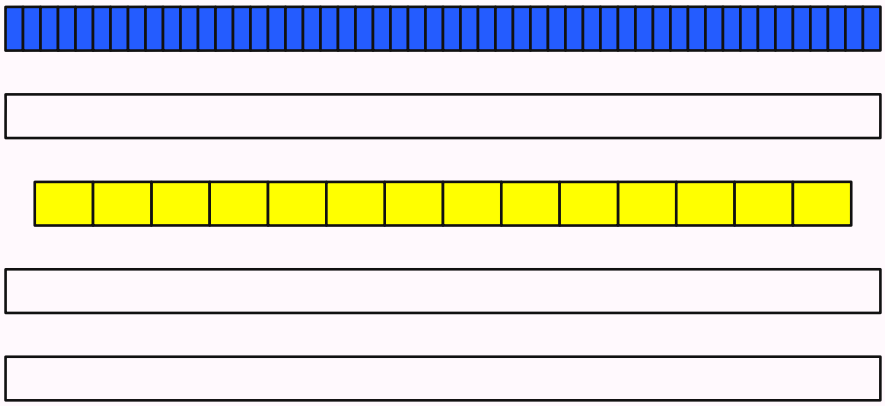
$\frac{15}{50} =$ $\frac{2}{15} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 34 – Solution

Goal

We want to subtract $\frac{30}{63}$ from $\frac{30}{36}$,
that is, we want to calculate $\frac{30}{36} - \frac{30}{63}$.

Simplify?

$$\frac{30}{36} = \frac{30 \div 6}{36 \div 6} = \frac{5}{6} \quad ; \quad \frac{30}{63} = \frac{30 \div 3}{63 \div 3} = \frac{10}{21}$$

Least Common Denominator

$$\frac{5}{6} = \frac{5 \times 7}{6 \times 7} = \frac{35}{42} \; ; \; \frac{10}{21} = \frac{10 \times 2}{21 \times 2} = \frac{20}{42}$$

Subtract

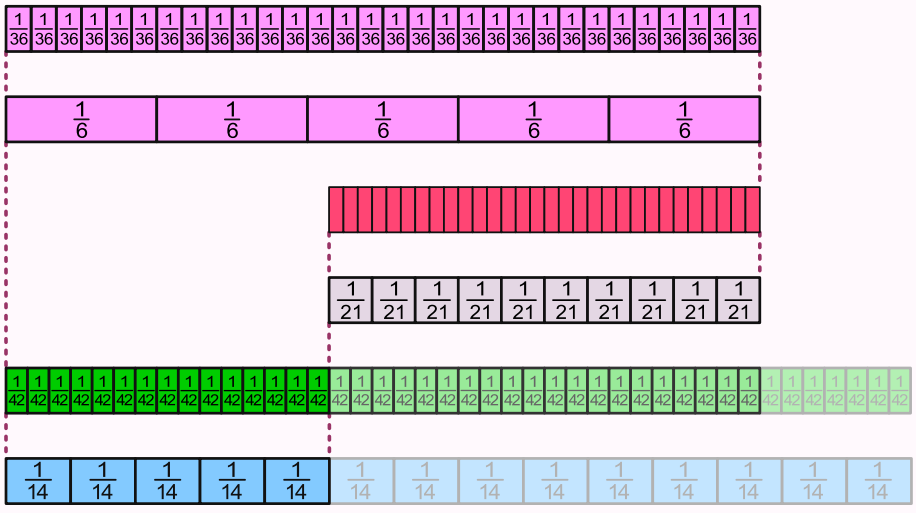
$$\frac{35}{42} - \frac{20}{42} = \frac{15}{42}$$

Simplify?

$$\frac{15}{42} = \frac{15 \div 3}{42 \div 3} = \frac{5}{14}$$

Result

$$\frac{30}{36} - \frac{30}{63} = \frac{30 \div 6}{36 \div 6} - \frac{30 \div 3}{63 \div 3} = \frac{5}{6} - \frac{10}{21} = \frac{5 \times 7}{6 \times 7} - \frac{10 \times 2}{21 \times 2} = \frac{35}{42} - \frac{20}{42} = \frac{15}{42} = \frac{15 \div 3}{42 \div 3} = \frac{5}{14}$$



Exercise 34 – Level 1

Goal

$$\frac{30}{36} - \frac{30}{63}$$

Simplify?

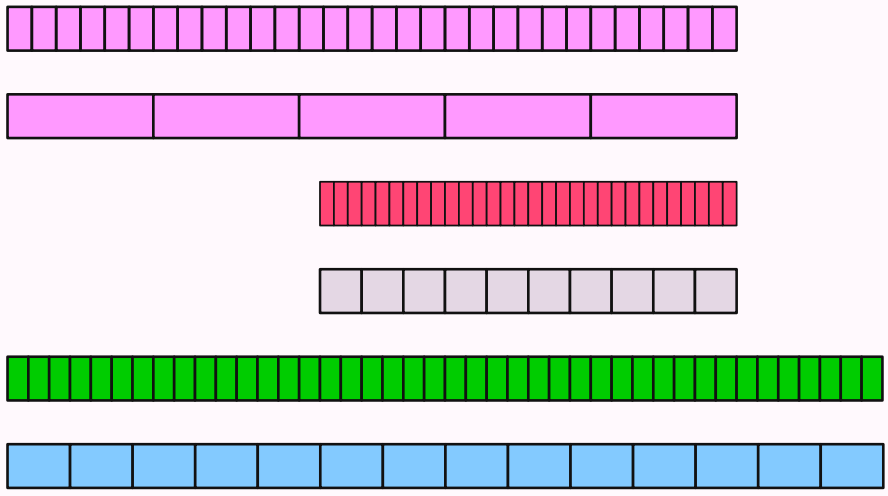
$\frac{30}{36} =$ $\frac{30}{63} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 34 – Level 2

Goal

$$\frac{30}{36} - \frac{30}{63}$$

Simplify?

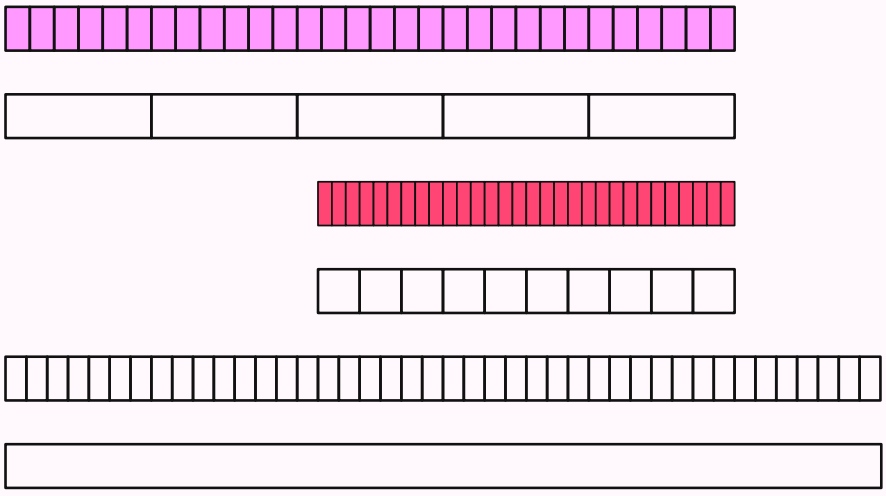
$\frac{30}{36} =$ $\frac{30}{63} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 34 – Level 3

Goal

$$\frac{30}{36} - \frac{30}{63}$$

Simplify?

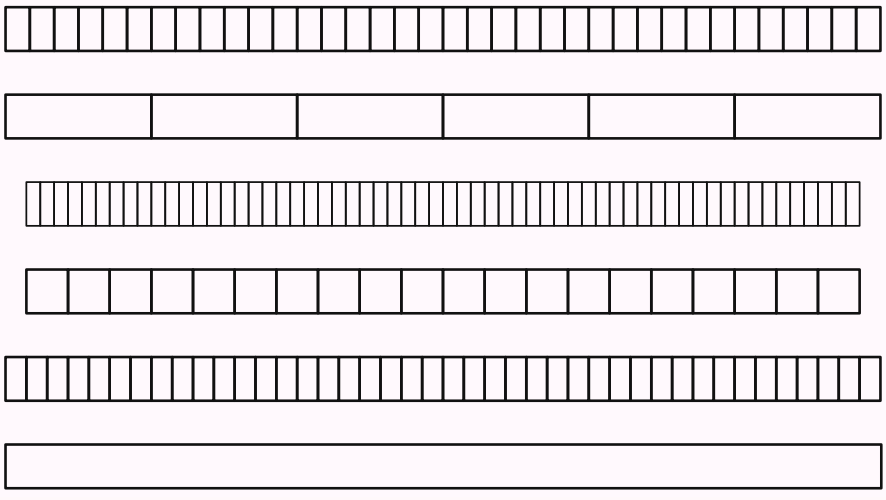
$\frac{30}{36} =$ $\frac{30}{63} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 35 – Solution

Goal

We want to subtract $\frac{39}{63}$ from $\frac{65}{60}$,
that is, we want to calculate $\frac{65}{60} - \frac{39}{63}$.

Simplify?

$$\frac{65}{60} = \frac{65 \div 5}{60 \div 5} = \frac{13}{12} \; ; \; \frac{39}{63} = \frac{39 \div 3}{63 \div 3} = \frac{13}{21}$$

Least Common Denominator

$$\frac{13}{12} = \frac{13 \times 7}{12 \times 7} = \frac{91}{84} \; ; \; \frac{13}{21} = \frac{13 \times 4}{21 \times 4} = \frac{52}{84}$$

Subtract

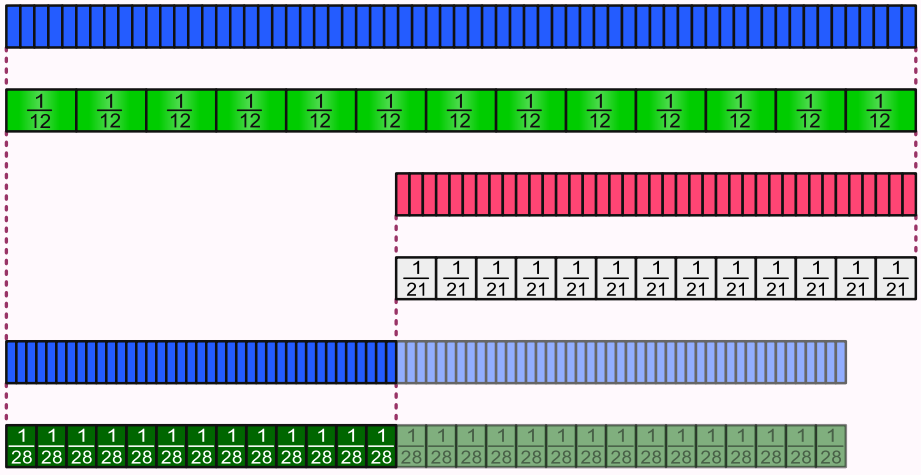
$$\frac{91}{84} - \frac{52}{84} = \frac{39}{84}$$

Simplify?

$$\frac{39}{84} = \frac{39 \div 3}{84 \div 3} = \frac{13}{28}$$

Result

$$\frac{65}{60} - \frac{39}{63} = \frac{65 \div 5}{60 \div 5} - \frac{39 \div 3}{63 \div 3} = \frac{13}{12} - \frac{13}{21} = \frac{13 \times 7}{21 \times 7} - \frac{13 \times 4}{21 \times 4} = \frac{91}{84} - \frac{52}{84} = \frac{39}{84} = \frac{39 \div 3}{84 \div 3} = \frac{13}{28}$$



Exercise 35 – Level 1

Goal

$$\frac{65}{60} - \frac{39}{63}$$

Simplify?

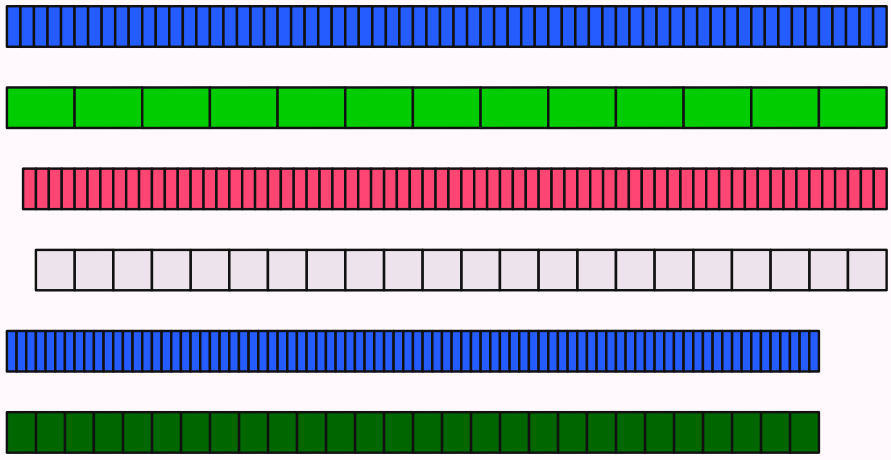
$\frac{65}{60} =$ $\frac{39}{63} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 35 – Level 2

Goal

$$\frac{65}{60} - \frac{39}{63}$$

Simplify?

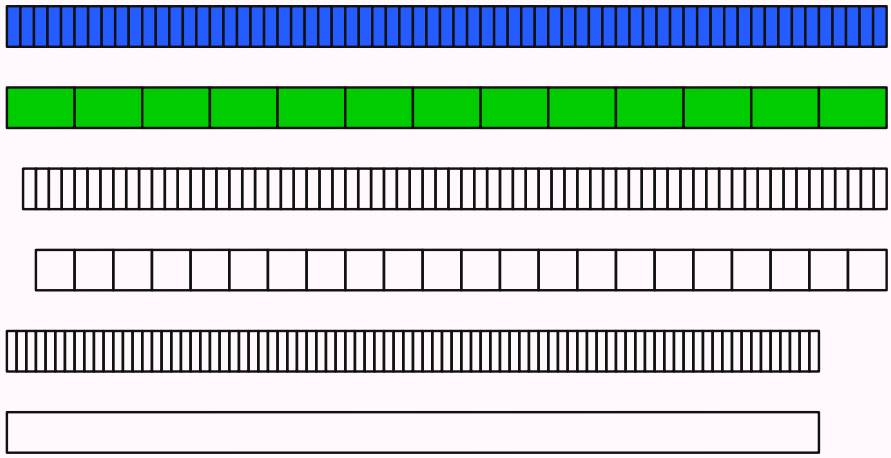
$\frac{65}{60} =$ $\frac{39}{63} =$

Least Common Denominator

Subtract

Simplify?

Result



Exercise 35 – Level 3

Goal

$$\frac{65}{60} - \frac{39}{63}$$

Simplify?

$\frac{65}{60} =$ $\frac{39}{63} =$

Least Common Denominator

Subtract

Simplify?

Result