

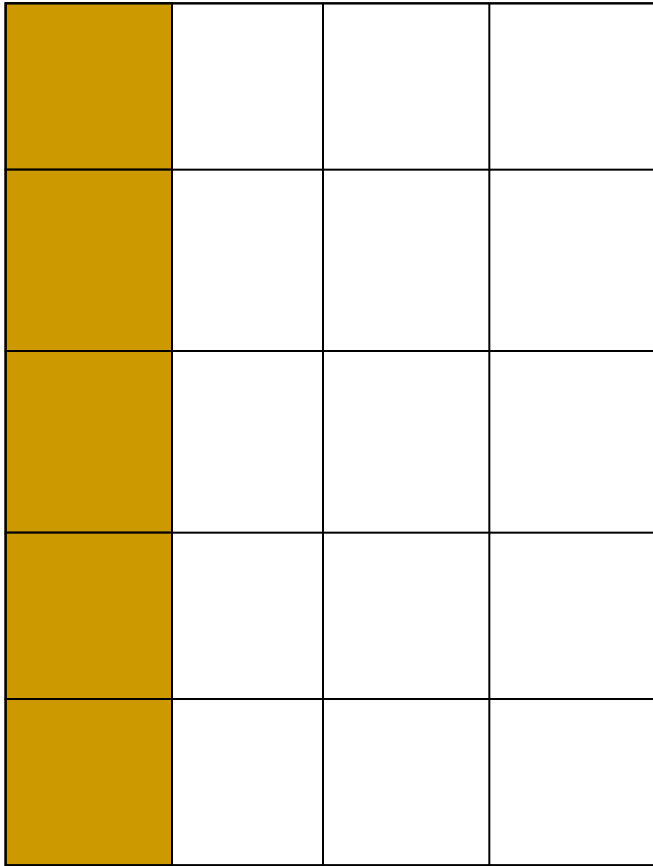

ОСНОВНОЕ СВОЙСТВО ДРОБИ

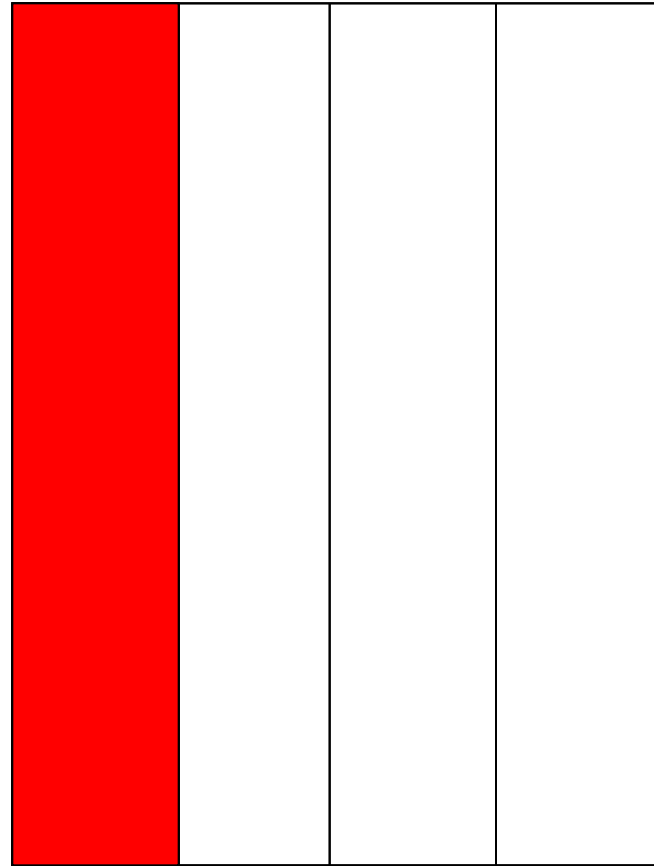
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- Основное свойство дроби
 - Сокращение дроби
 - Приведение дроби к нужному знаменателю
- 

Основное свойство дроби



$$\frac{5}{20}$$

=



$$\frac{1}{4}$$

Основное свойство дроби

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

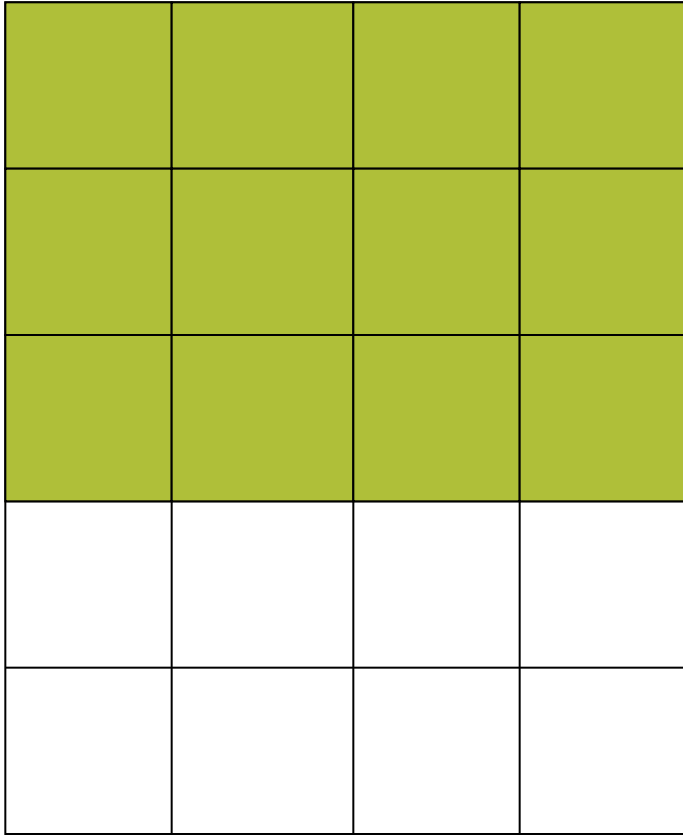
Diagram illustrating the simplification of the fraction $\frac{5}{20}$ to $\frac{1}{4}$ by dividing both the numerator and the denominator by 5. A curved arrow above the fraction points from 20 to 4, and another curved arrow below points from 5 to 1. The number 5 is written above the top arrow and below the bottom arrow.

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

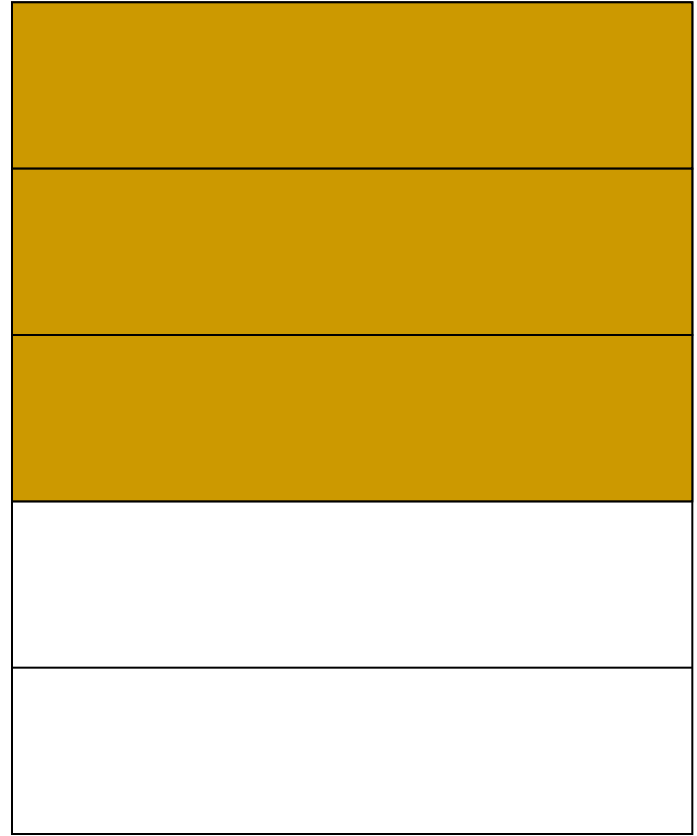
Diagram illustrating the expansion of the fraction $\frac{1}{4}$ to $\frac{5}{20}$ by multiplying both the numerator and the denominator by 5. A curved arrow above the fraction points from 1 to 5, and another curved arrow below points from 4 to 20. The number 5 is written above the top arrow and below the bottom arrow.

Основное свойство дроби

Основное свойство дроби

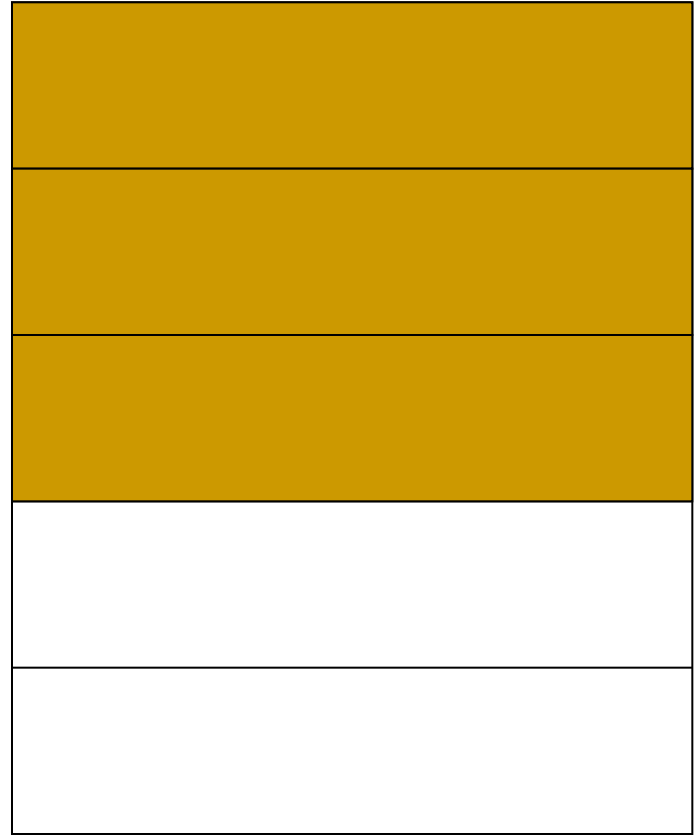
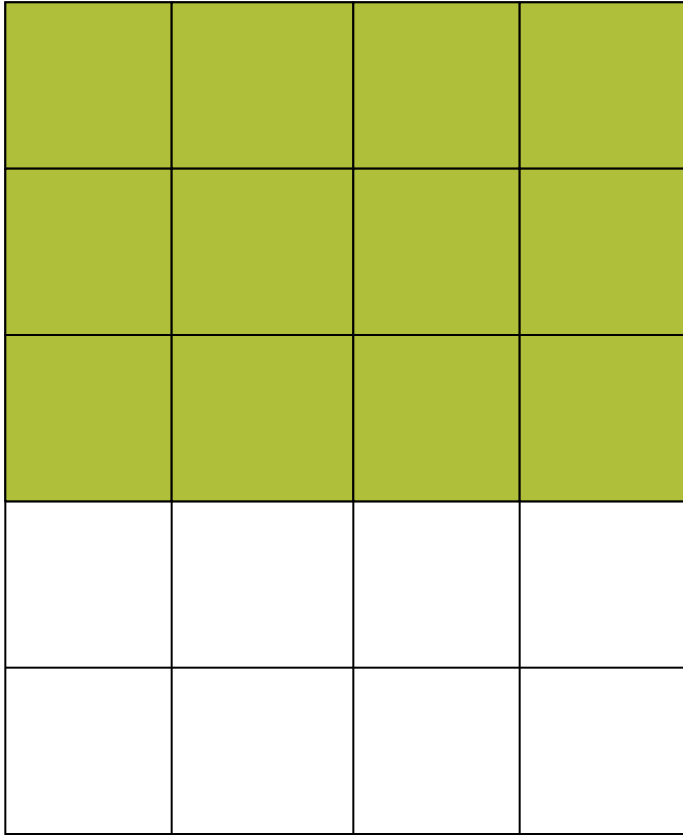


$$\frac{12}{20}$$



$$\frac{3}{5}$$

Основное свойство дроби



$$\frac{12}{20}$$

=

$$\frac{3}{5}$$

Основное свойство дроби

$$\frac{12}{20} = \frac{3}{5}$$

$\div 4$

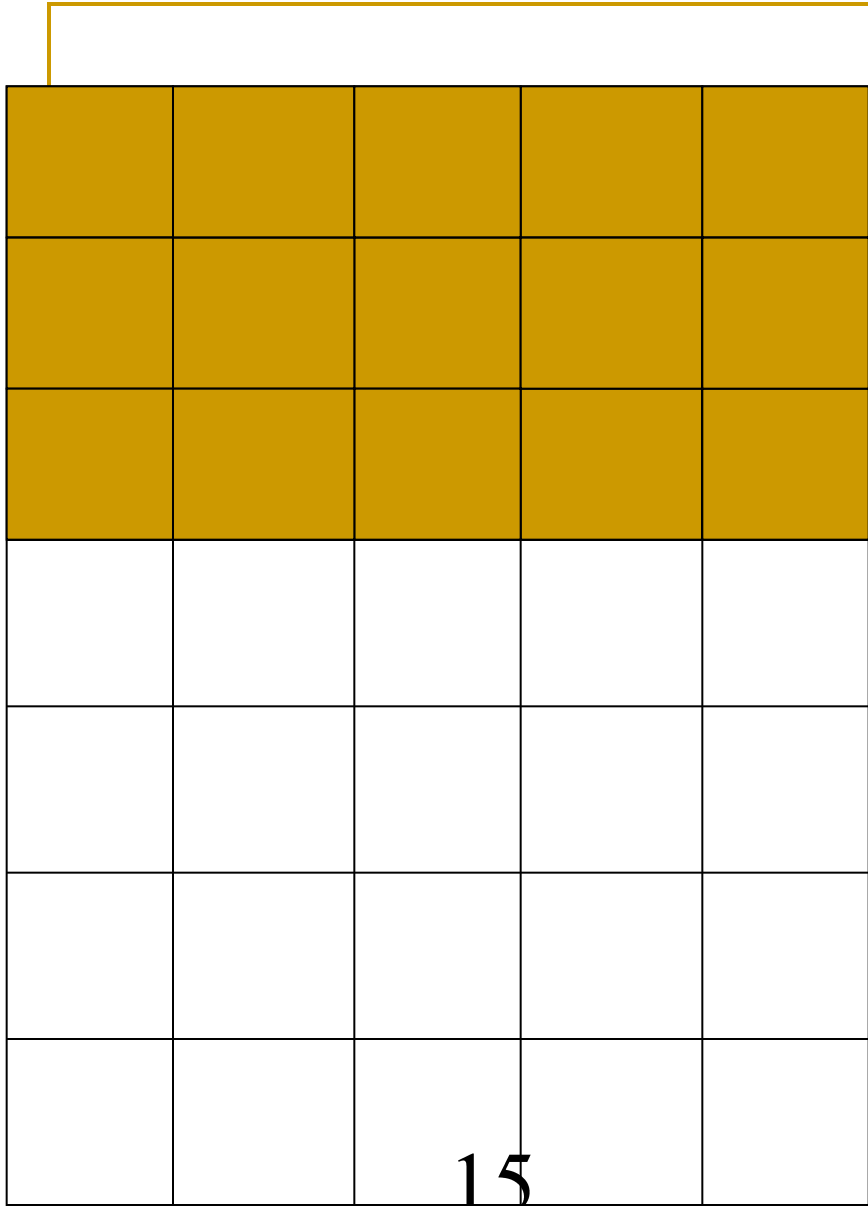
$\div 4$

$$\frac{12}{20} = \frac{3}{5}$$

$\cdot 4$

$\cdot 4$





15

35

=



3

7

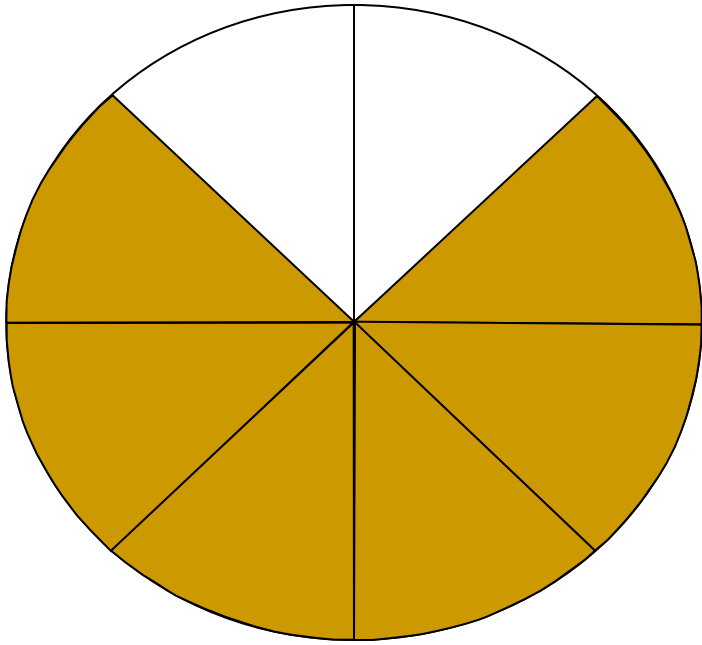
Основное свойство дроби

$$\frac{15}{35} = \frac{3}{7}$$

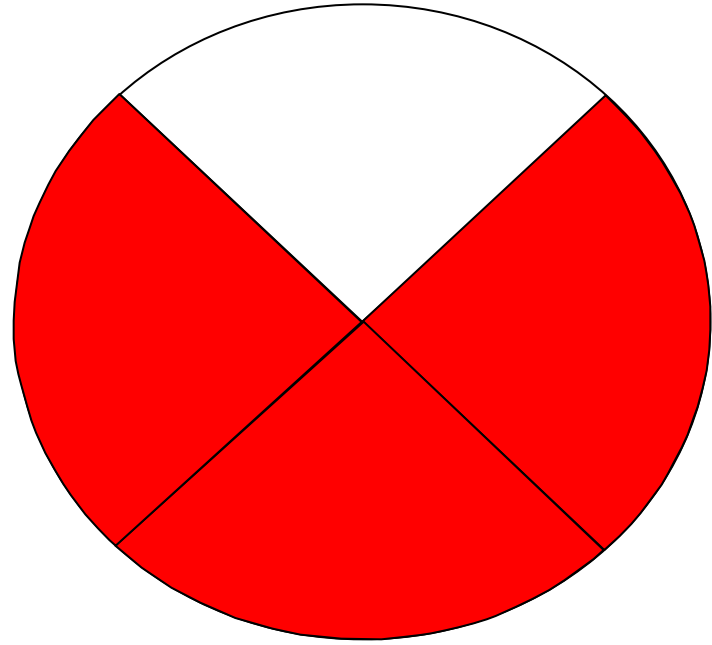
Diagram illustrating the simplification of the fraction $\frac{15}{35}$ to $\frac{3}{7}$ by dividing both the numerator and the denominator by 5. The operation is indicated by a division symbol $\div 5$ above the fraction and another $\div 5$ below it. Two curved arrows show the division of 15 by 5 to get 3 and 35 by 5 to get 7.

$$\frac{15}{35} = \frac{3}{7}$$

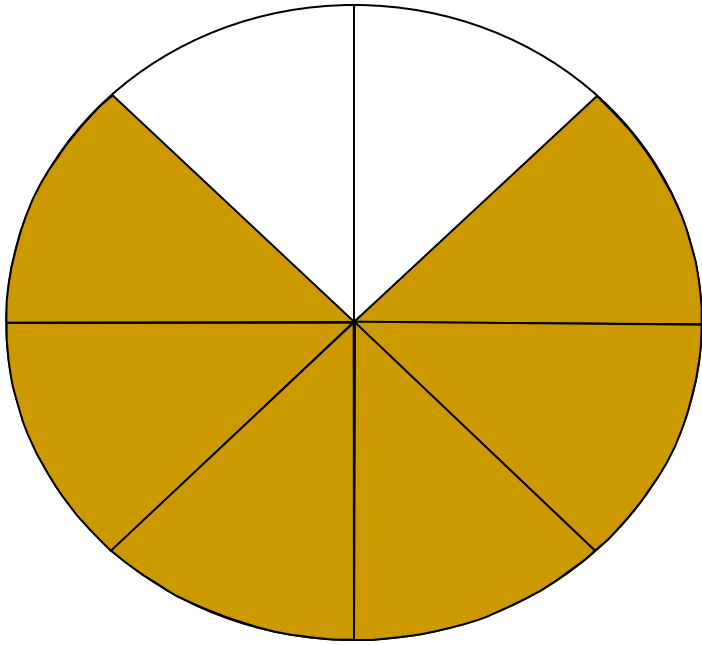
Diagram illustrating the expansion of the fraction $\frac{3}{7}$ to $\frac{15}{35}$ by multiplying both the numerator and the denominator by 5. The operation is indicated by a multiplication symbol $\cdot 5$ above the fraction and another $\cdot 5$ below it. Two curved arrows show the multiplication of 3 by 5 to get 15 and 7 by 5 to get 35.



$$\frac{6}{8}$$

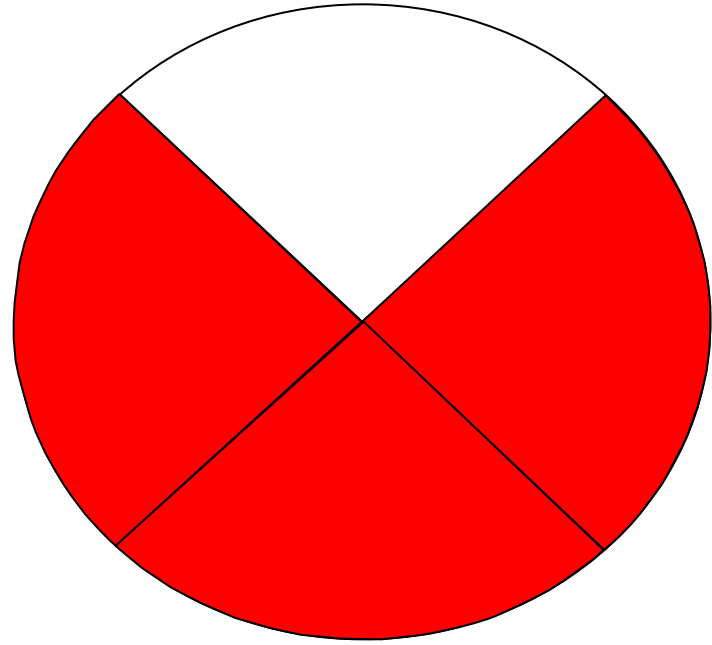


$$\frac{3}{4}$$



$$\frac{6}{8}$$

=



$$\frac{3}{4}$$

Основное свойство дроби

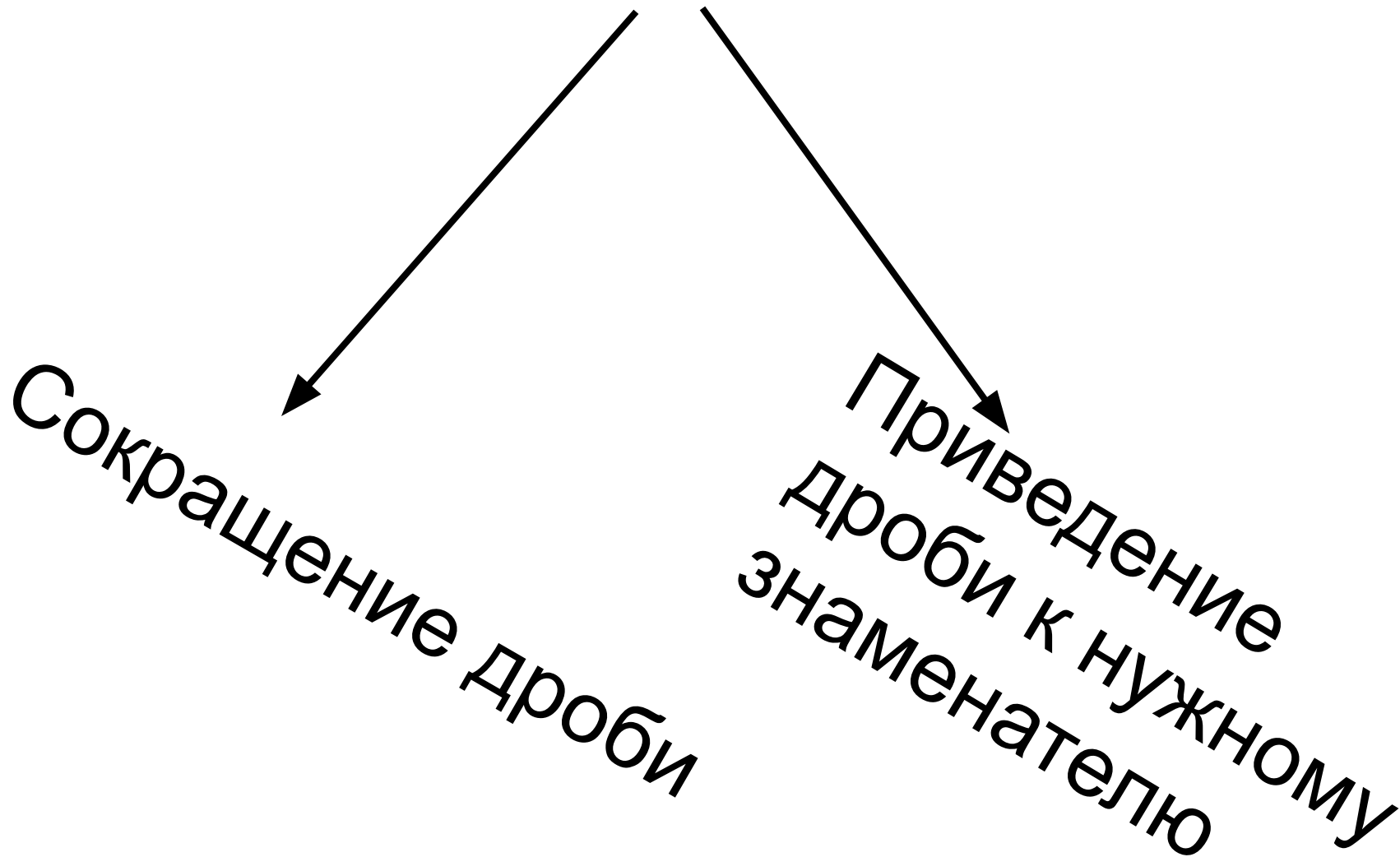
$$\frac{6}{8} = \frac{3}{4}$$

Diagram illustrating the simplification of the fraction $\frac{6}{8}$ to $\frac{3}{4}$ by dividing both the numerator and the denominator by 2. The number 2 is written above the fraction bar with a division symbol (a dot above the 2), and another 2 is written below the fraction bar with a division symbol. Two curved arrows indicate the division process: one arrow starts at the numerator 6 and points to the numerator 3, and another arrow starts at the denominator 8 and points to the denominator 4.

$$\frac{6}{8} = \frac{3}{4}$$

Diagram illustrating the expansion of the fraction $\frac{3}{4}$ to $\frac{6}{8}$ by multiplying both the numerator and the denominator by 2. The number 2 is written above the fraction bar with a multiplication symbol (a dot to the left of the 2), and another 2 is written below the fraction bar with a multiplication symbol. Two curved arrows indicate the multiplication process: one arrow starts at the numerator 3 and points to the numerator 6, and another arrow starts at the denominator 4 and points to the denominator 8.

Основное свойство дроби



Основное свойство дроби

Сокращение дроби

Приведение дроби к нужному знаменателю

Сокращение дроби

$$\begin{array}{ccc} & :n & \\ \curvearrowright & & \curvearrowleft \\ \frac{a}{b} & = & \frac{c}{k} \\ \curvearrowleft & & \curvearrowright \\ & :n & \end{array}$$

Говорят, что дробь сократили на **n**

Сокращение дроби

$$\frac{a}{b} = \frac{a : n}{b : n} = \frac{c}{k}$$

Если числитель и знаменатель дроби
разделили на одно и то же , не

равное нулю число **n** , то говорят, что

дробь $\frac{a}{b}$ сократили на **n**.

Подробная запись

$$\frac{12}{30} = \frac{12:2}{30:2} = \frac{6}{15}$$

$$\frac{12}{30} = \frac{12:3}{30:3} = \frac{4}{10}$$

$$\frac{12}{30} = \frac{12:6}{30:6} = \frac{2}{5}$$

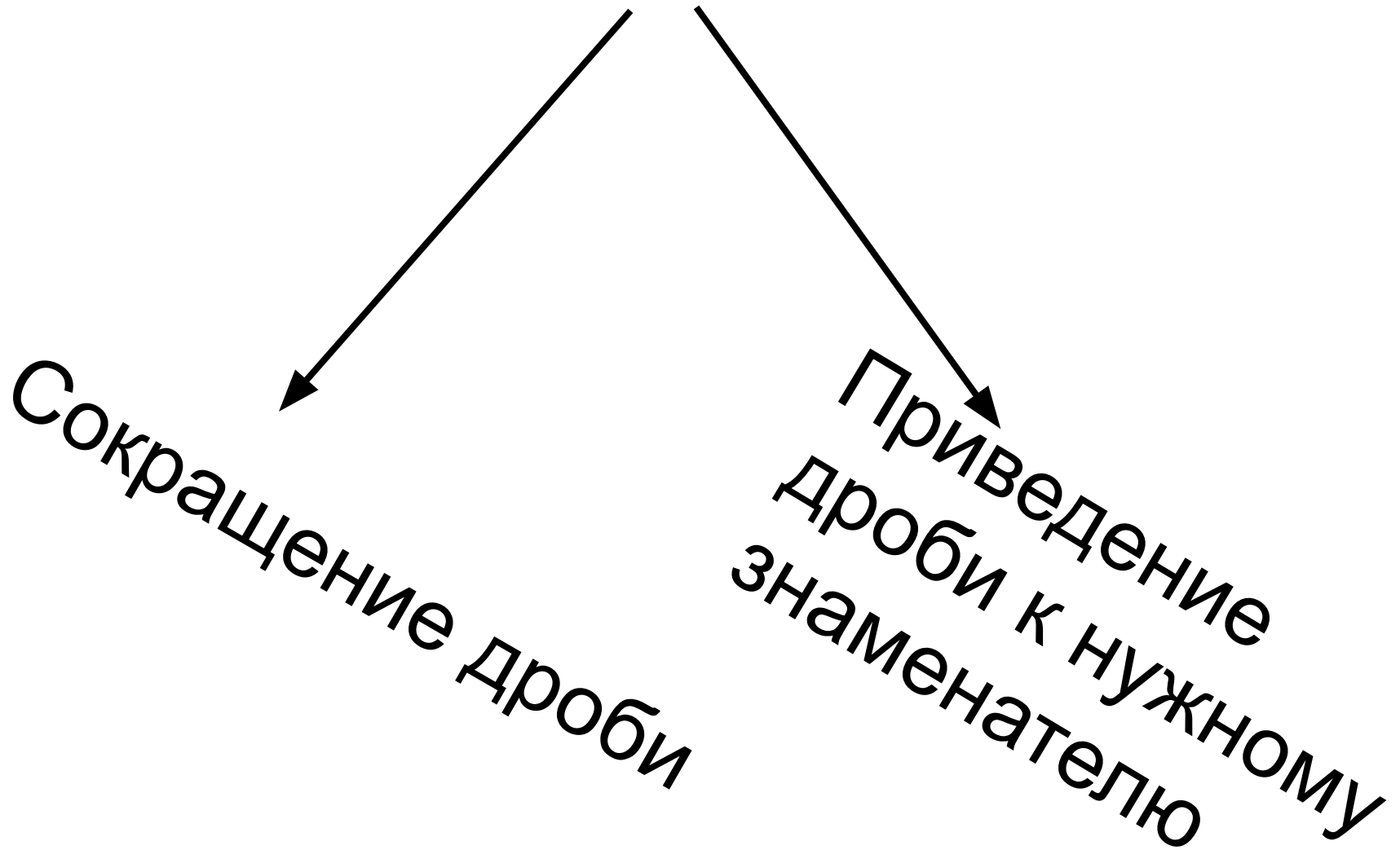
Краткая запись

$$\frac{12}{30} = \frac{6}{15}$$

$$\frac{12}{30} = \frac{4}{10}$$

$$\frac{12}{30} = \frac{2}{5}$$

Основное свойство дроби



Приведение дроби к нужному знаменателю

$$\frac{a}{b} = \frac{a \cdot n}{b \cdot n} = \frac{c}{k}$$

Если числитель и знаменатель дроби умножили на одно и то же, не равное нулю число n , то говорят, что дробь $\frac{a}{b}$ привели к знаменателю k .

Число n называется дополнительным множителем.

Подробная запись

$$\frac{12^{(2)}}{30} = \frac{12 \cdot 2}{30 \cdot 2} = \frac{24}{60}$$

$$\frac{12^{(3)}}{30} = \frac{12 \cdot 3}{30 \cdot 3} = \frac{36}{90}$$

$$\frac{12^{(6)}}{30} = \frac{12 \cdot 6}{30 \cdot 6} = \frac{72}{180}$$

Краткая запись

$$\frac{12^{(2)}}{30} = \frac{24}{60}$$

$$\frac{12^{(3)}}{30} = \frac{36}{90}$$

$$\frac{12^{(6)}}{30} = \frac{72}{180}$$

Спасибо за внимание.
