

Основное свойство дроби

Выполнила: Хижняк

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МБОУ СОШ №9,

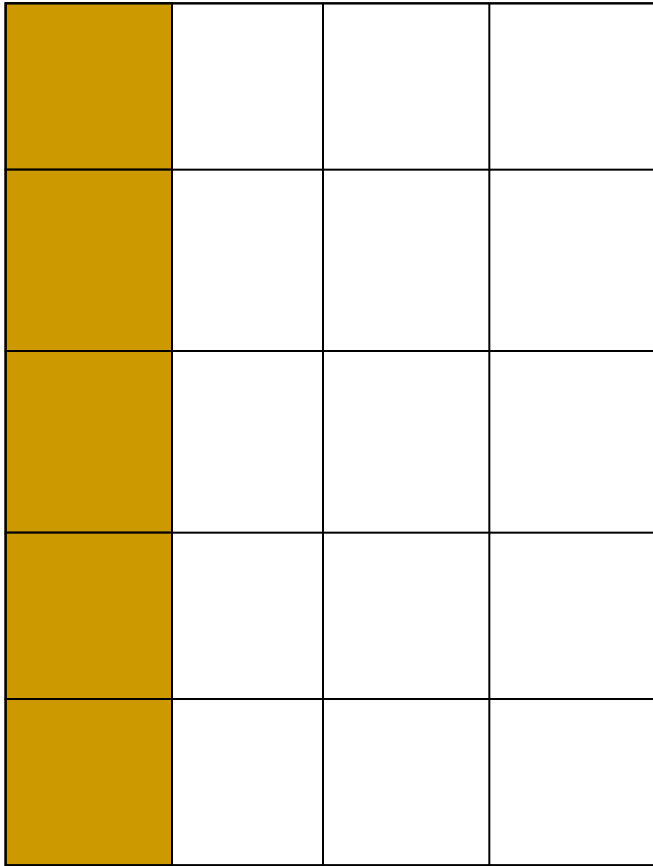
город Златоуст,

Челябинская область.

2012 год

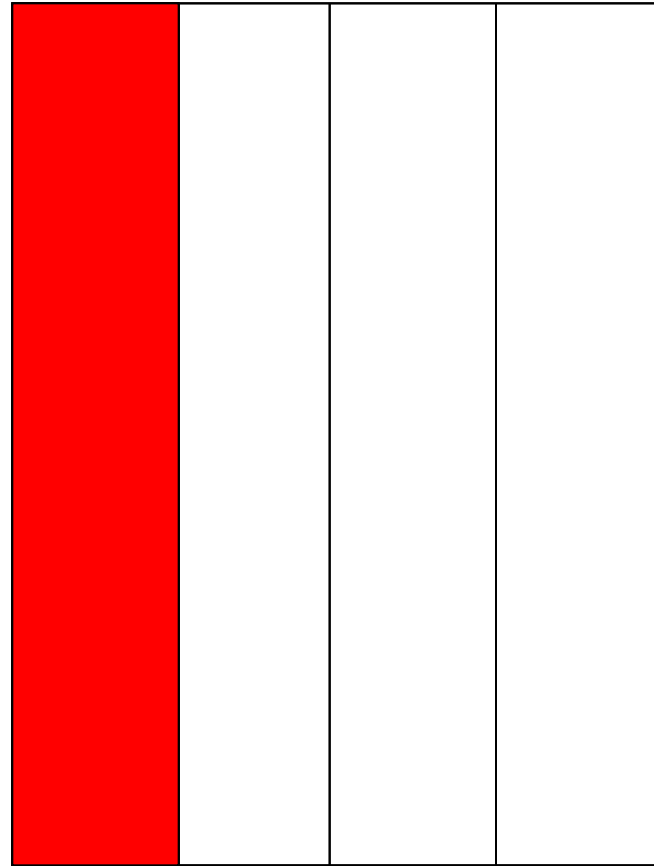
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- Основное свойство дроби
 - Сокращение дроби
 - Приведение дроби к нужному знаменателю
- 

Основное свойство дроби



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

=



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

Основное свойство дроби

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

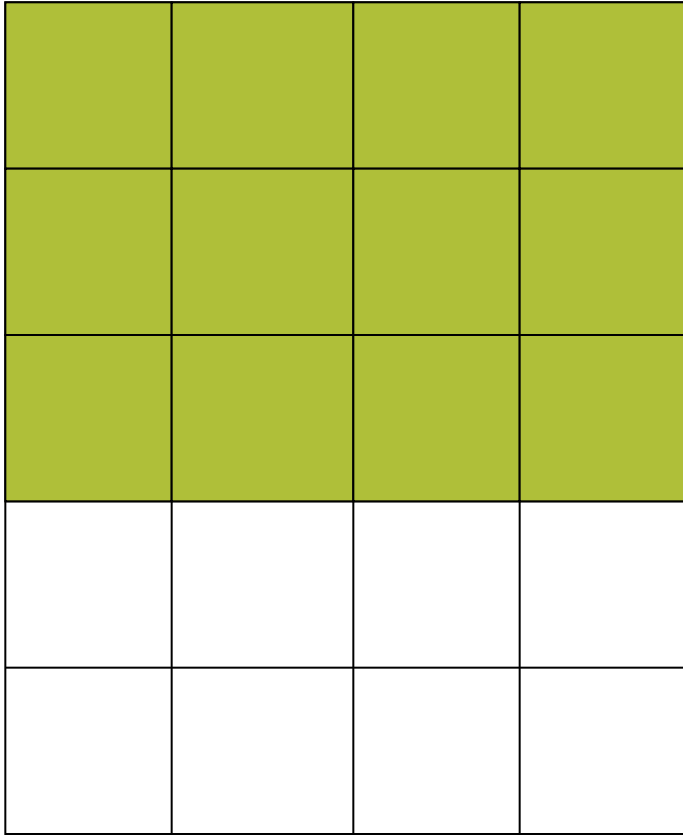
Diagram illustrating the simplification of the fraction $\frac{5}{20}$ to $\frac{1}{4}$ by dividing both the numerator and the denominator by 5. The operation is indicated by a curved arrow above the fraction with a $\div 5$ symbol above it, and another curved arrow below the fraction with a $\div 5$ symbol below it.

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

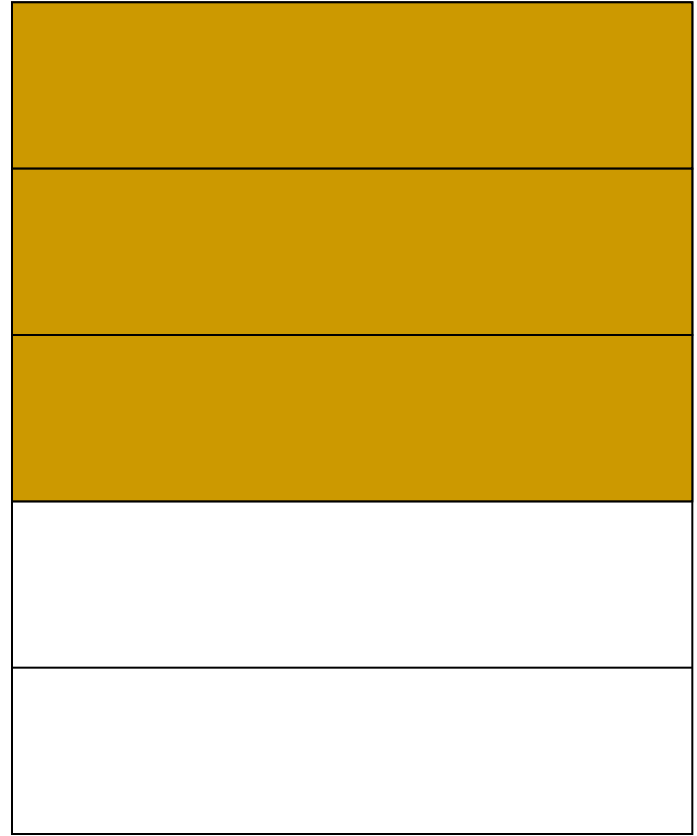
Diagram illustrating the expansion of the fraction $\frac{1}{4}$ to $\frac{5}{20}$ by multiplying both the numerator and the denominator by 5. The operation is indicated by a curved arrow above the fraction with a $\cdot 5$ symbol above it, and another curved arrow below the fraction with a $\cdot 5$ symbol below it.

Основное свойство дроби

Основное свойство дроби

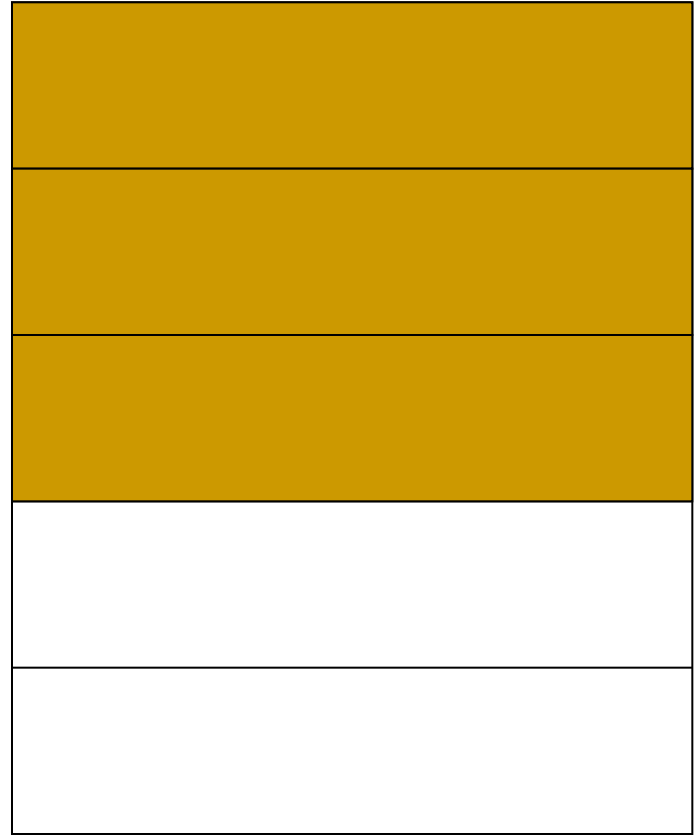
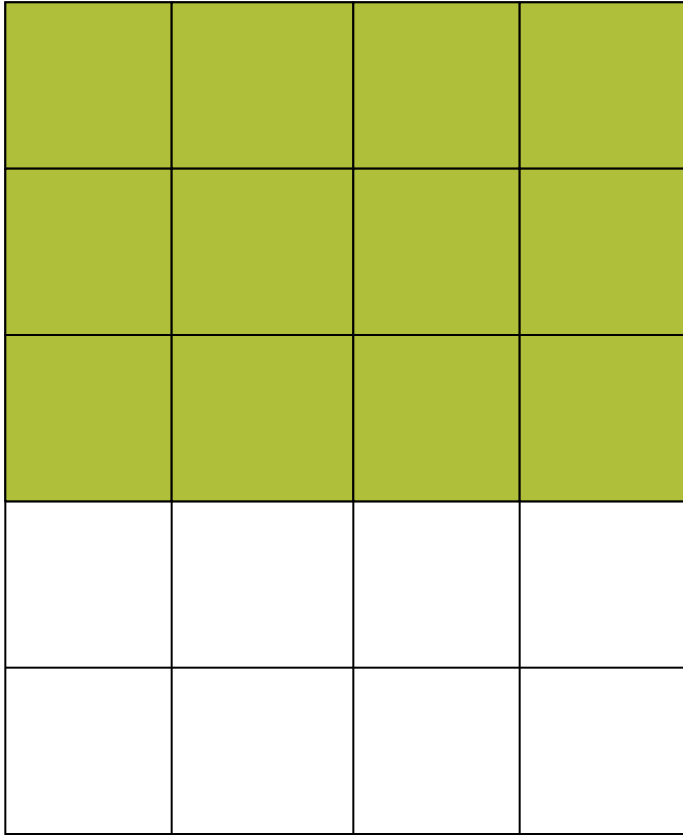


$$\frac{12}{20}$$



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

Основное свойство дроби



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

=

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

Основное свойство дроби

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

$\div 4$

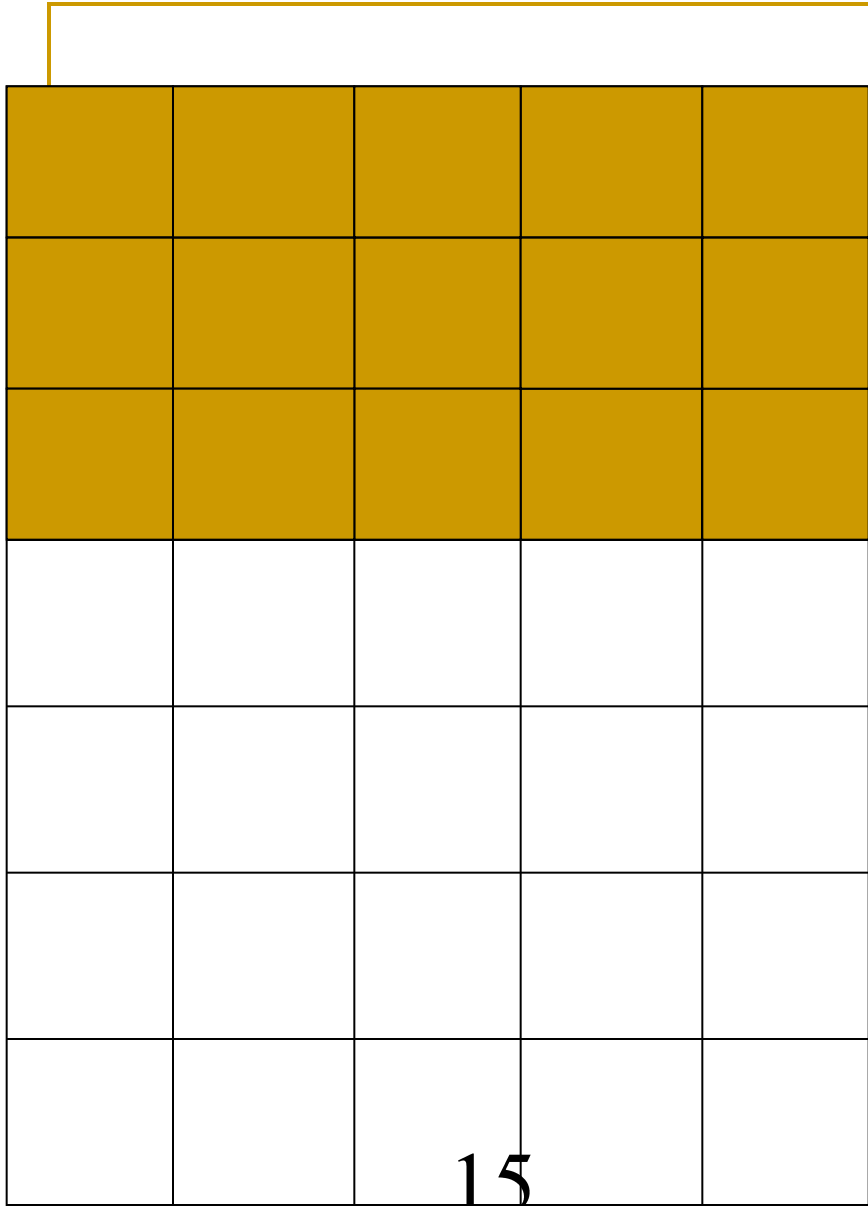
$\div 4$

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

$\cdot 4$

$\cdot 4$





15

35

=



3

7

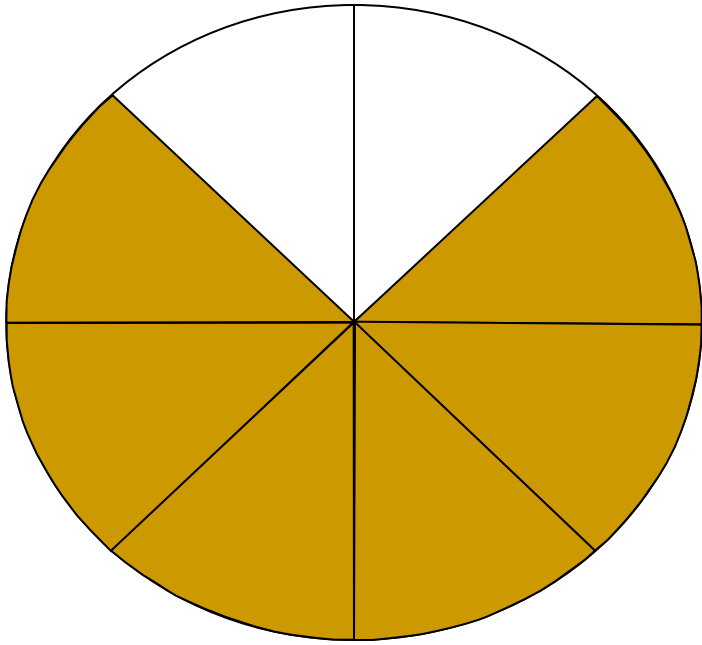
Основное свойство дроби

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

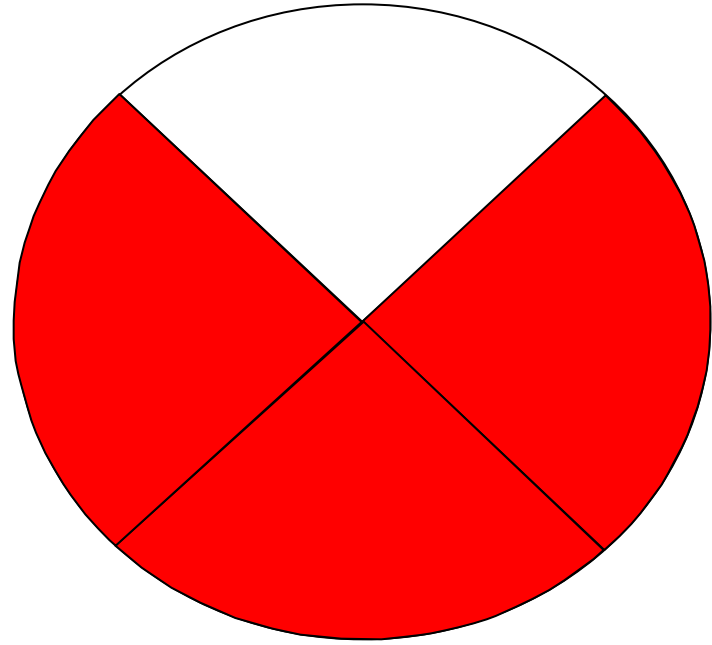
Diagram illustrating the simplification of the fraction $\frac{15}{35}$ to $\frac{3}{7}$ by dividing both the numerator and the denominator by 5. The operation is indicated by a division symbol $\div 5$ above the fraction and another $\div 5$ below it. Two curved arrows show the division of 15 by 5 to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

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

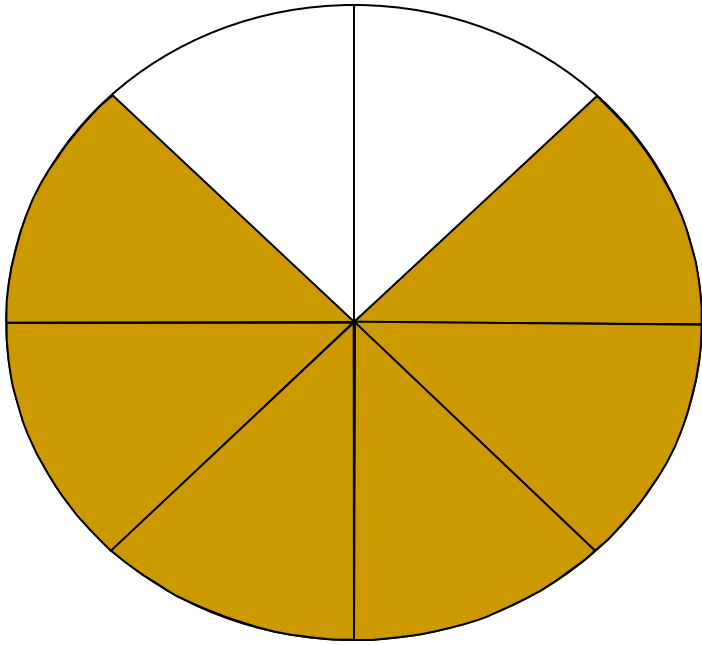
Diagram illustrating the expansion of the fraction $\frac{3}{7}$ to $\frac{15}{35}$ by multiplying both the numerator and the denominator by 5. The operation is indicated by a multiplication symbol $\cdot 5$ above the fraction and another $\cdot 5$ below it. Two curved arrows show the multiplication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



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

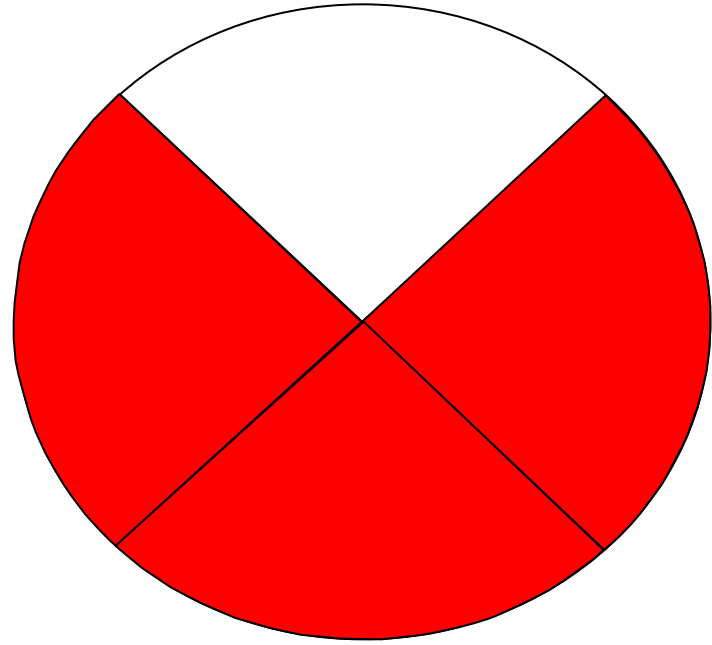


$$\frac{3}{4}$$



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

=



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

Основное свойство дроби

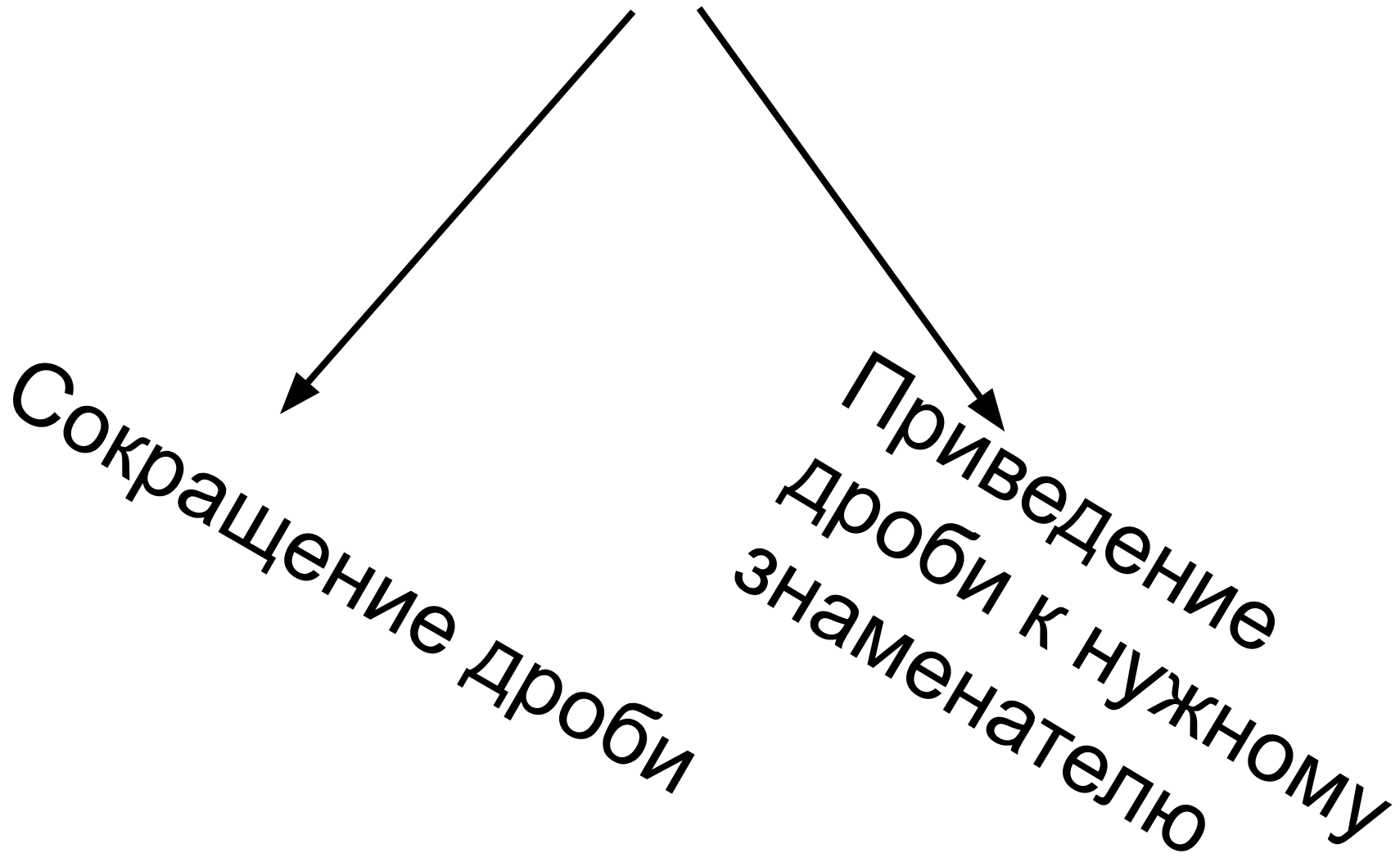
$$\frac{6}{8} = \frac{3}{4}$$

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 downward arrow pointing to the numerator 6, and below the fraction bar with an upward arrow pointing to the denominator 8.

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

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 downward arrow pointing to the numerator 3, and below the fraction bar with an upward arrow pointing to the denominator 4.

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

Сокращение дроби

Приведение дроби к нужному знаменателю

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.
