

Math 4a. Homework 8.



1. Write the expressions as fractions and evaluate:

Example:

$$(16 \cdot 3) : 9 = \frac{16 \cdot 3}{9} = \frac{16}{3}$$

a. $18 : 63$; b. $2 : 5 : 7$; c. $2 : 8 \cdot 3$; d. $100 \cdot 6 : 40$; e. $5 : 15 \cdot 3$

f. $(21 \cdot 18) : 14$; g. $50 : (16 \cdot 25)$; h. $(12 \cdot 15) : 40$; i. $(4 \cdot 24) : (2 \cdot 8)$

2. Evaluate:

$$\frac{3\frac{5}{11} \cdot 6\frac{3}{4}}{3\frac{5}{11} \cdot 6\frac{3}{4} + 3\frac{5}{11} \cdot 1\frac{1}{2}}$$

3. To do his homework, Peter needs to write an essay and solve math problems. He spent $\frac{1}{2}$ hours doing his homework. However, the time he spent writing an essay was $\frac{1}{10}$ hours less than the time he spent solving math problems. How much time did he dedicate to working on math problems?

4. The model of the house is $\frac{1}{25}$ of its real size. The width of a window on the model is 5 cm. How wide is a window in a real house?



5. What is the length of a segment if
- $\frac{2}{5}$ of its length is 12 meters;
 - $\frac{3}{4}$ of its length is 9 centimeters;
 - $\frac{3}{5}$ of its length is 15 millimeters.
 - $\frac{2}{7}$ of its length is 8 meters.



6. From 42 m of fabric, 10 identical duvet covers were sewn, and from 33 m - 15 identical sheets. How much fabric is needed for a set that includes 1 sheet and 1 duvet cover?

7. Mary's 10 steps are 9 meters, while Julia's 20 steps are 17 meters. Whose steps are longer?

8. The sum of all numbers in each square is 10. What number should be placed instead of “?” ?

$2\frac{1}{7}$	$5\frac{4}{7}$
$\frac{3}{7}$?

$1\frac{4}{5}$	$3\frac{2}{5}$
?	$2\frac{1}{5}$

$\frac{5}{9}$?
$2\frac{7}{9}$	$1\frac{2}{9}$

?	$6\frac{8}{11}$
$\frac{2}{11}$	$2\frac{5}{11}$

9. Big rectangle contains 9 squares. The side of red square is 1 unit; the side of blue square is 7 units. Find sides of all other squares and the sides of the big rectangle.

