## Math 4a. Homework 8.



1. Write the expressions as fractions and evaluate:

Example:

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

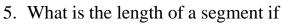
a. 18:63; b. 2:5:7; c.  $2:8\cdot3$ ; d.  $100\cdot6:40$ ; e.  $5:15\cdot3$ 

f. (21 · 18): 14; g. 50: (16 · 25); h. (12 · 15): 40; i. (4 · 24): (2 · 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?



- a.  $\frac{2}{5}$  of its length is 12 meters;
- b.  $\frac{3}{4}$  of its length is 9 centimeters;
- c.  $\frac{3}{5}$  of its length is 15 millimeters.
- d.  $\frac{2}{7}$  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.

