

## Homework 6.



1. Bring the following fractions to denominator 36, if possible:

$$\frac{7}{12}; \quad \frac{7}{11}; \quad \frac{7}{10}; \quad \frac{7}{9}; \quad \frac{7}{8}; \quad \frac{7}{7}$$

2. Simplify the following fractions:

Examples:

$$\frac{3 \cdot 5 \cdot 7}{5 \cdot 7 \cdot 11} = \frac{3}{11}; \quad \frac{56}{64} = \frac{7 \cdot 8}{8 \cdot 8} = \frac{7}{8}$$

$$\frac{2 \cdot 3}{4 \cdot 5}; \quad \frac{2 \cdot 3}{7 \cdot 2}; \quad \frac{5 \cdot 4}{4 \cdot 9}; \quad \frac{7 \cdot 5}{2 \cdot 7}$$

$$\frac{22}{66}; \quad \frac{125}{75}; \quad \frac{75}{100}; \quad \frac{24}{360}; \quad \frac{125}{1000}; \quad \frac{100}{250}; \quad \frac{198}{126}$$

3. Painter painted  $\frac{2}{7}$  of the house in 4 days. How many days will take him to paint the whole house?

4. Evaluate:

Example:

$$\frac{1}{2} + \frac{1}{3} - \frac{1}{4} = \frac{1}{2} - \frac{1}{4} + \frac{1}{3} = \frac{2}{4} - \frac{1}{4} + \frac{1}{3} = \frac{1}{4} + \frac{1}{3} = \frac{3}{12} + \frac{4}{12} = \frac{5}{12}$$

Or

$$\frac{1}{2} + \frac{1}{3} - \frac{1}{4} = \frac{6}{12} - \frac{4}{12} + \frac{3}{12} = \frac{6 - 4 + 3}{12} = \frac{5}{12}$$

$$a. \quad \frac{1}{2} - \frac{1}{4} + \frac{3}{5}; \quad b. \quad \frac{3}{4} - \frac{1}{2} + \frac{7}{8}; \quad c. \quad \frac{5}{6} - \frac{2}{3} + \frac{1}{4};$$

5. Evaluate:

$$\frac{3}{7} \cdot 2; \quad 3 \cdot \frac{1}{6}; \quad 9 \cdot \frac{5}{6}; \quad 2\frac{1}{3} \cdot 2; \quad 4 \cdot 1\frac{1}{2};$$

6. Without doing calculation compare:

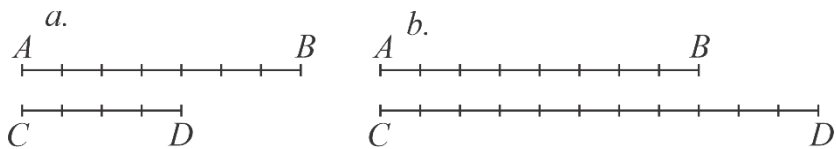
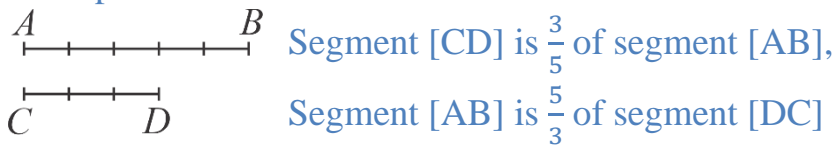
a.  $\frac{1}{3} + \frac{1}{4} \dots \frac{1}{2}$ ;

b.  $\frac{1}{5} + \frac{1}{6} + \frac{1}{7} + \frac{1}{8} \dots \frac{1}{2}$

7. Math class lasts for  $\frac{3}{4}$  of an hour. A  $\frac{1}{6}$  of an hour is spent in recess. In what fraction of an hour do class and recess occur together?

8. What part of the segment [AB] is the segment [DC]?  
Which part of the segment [DC] is the segment [AB] is?

Example:



9. Rebecca wants to decorate the box with a birthday present for her friend Alice with a ribbon as shown in the picture. How long should the ribbon be if 90 cm should be left for the ends and the bow?

