Math 4a. Homework 13.

1. Evaluate:

   $a.\quad \dfrac{\frac{1}{2} + 1\frac{1}{4}}{3 - 1\frac{3}{8}};$

   $b.\quad \dfrac{6}{4 + \dfrac{9}{3 - \dfrac{3}{2 + \dfrac{1}{1 - \frac{1}{2}}}}};$

2. a. A sequence of four numbers was written, each of which is 3 times larger than the previous one. The last number is 486. Find the first number.

   b. A sequence of four numbers was written, each of which is 6 times smaller than the previous one. The last number is 2. Find the first number.

3. The mother was 32 years old when she gave birth to her daughter, and 35 years old when she gave birth to her son. How old is each of them now, if they are all together 59 years old?

4. There are 72 more books in the first box than in the second. How many books need to be transferred from the first box to the second so that there are the same number of books in both boxes?

5. In the number 38*6107*, replace the asterisks with digits so that the resulting number is a multiple of

   a. multiple of 2;
   b. multiple of 5;
   c. multiple of 10;
   d. multiple of 3;
   e. multiple of 9;
   f. multiple of 2 and 3;
   g. multiple of 15;
   h. multiple of 45.

6.