

Homework 23.



1. A swimming pool can be filled in 12 hours and emptied in 18 hours. One day, while the pool is being filled, the drain is accidentally left open. How long will it take to fill the pool with the drain open?

2. Compare *without* doing any calculation:

$$2.4 \cdot 4.2 \dots 4.2;$$

$$0.3 \cdot 3 \dots 3;$$

$$0.3 \cdot 3 \dots 0.3$$

$$1.2:4 \dots 1.2;$$

$$1.2:0.4 \dots 1.2$$

$$0.4:1.2 \dots 0.4$$

Do calculations and check.

3. Compare if possible (a is a positive ($a > 0$) number, not necessarily a natural number):

$$a \cdot \frac{1}{2} \dots a;$$

$$a \cdot 0.3 \dots a;$$

$$a: \frac{1}{2} \dots a$$

$$a \cdot 2 \dots 2;$$

$$a: 0.7 \dots a;$$

$$a: 0.7 \dots 0.7;$$

$$a \cdot 100 \dots 1000;$$

$$a: 100 \dots 1000$$

4. There are 21 juice bottles, out of which 7 bottles are full, 7 are half-full, and the remaining 7 are empty, to be divided equally among 3 friends. You don't have any measuring device. How will you divide both the bottles and juice equally among them?

5. In the first box, there are twice as many pencils as in the second box. Mary took 5 pencils from the first box and put 3 pencils in the second box. After that, the number of pencils in both boxes became equal. How many pencils were in each box at the beginning?

6. Solve the equations:

$$a. \quad 12 + 3x = 33$$

$$b. \quad 2x + 3 = 100x - 95$$

$$c. \quad -(4s - 7) = 11 - 2s$$

$$d. \quad 18 - 4y = 7(2y + 6)$$