

**Exercises:**

- Peter took 5 exams at the end of the year. Grade for exams are A, B, C, D. How many different ways are there to fill his report card?
- Each phone number has 10 digits: (NXX) NXX-XXXX. How many different phone numbers may be created in the US? The area code (first three digits of the number) and the number itself can't start with 0 or 1. (N can be 2-9 and X can be 0-9)
- "Give me \$100 and I will be twice as rich as you are" said Mr. X to Mr. Y. Mr Y answered to Mr. X: "Give me only \$10 and I will become 6 times as rich as you are." How many dollars did each of them have?
- A swimming pool can be filled by one pipe in 10 hours or by second pipe in 15 hours. For 2.5 hours the pool was being filled by the first pipe, then the second pipe was open. In how many hours after the opening of the second pipe the swimming pool will be filled up?  
Will be filled up by  $\frac{3}{4}$ ?
- Evaluate:

$$7\frac{1}{5} : 2\frac{4}{7} - 8\frac{3}{4} : \left(10 - \left(5\frac{1}{2}\right)^2 : 4\frac{2}{5}\right) + \left(3\frac{1}{8} \cdot 2\right) : \left(8\frac{1}{12} - 1\frac{5}{6}\right)$$

The answer is 1.

- Fill the empty spaces so that the equalities are true.
  - $\square \cdot (a + 10) = \square \cdot a + 20$
  - $3 \cdot (a + b) = \square \cdot \square + \square \cdot \square$
  - $\square \cdot m + 15 = \square \cdot (m + 5)$
  - $12 + \square \cdot x = \square \cdot (3 + 2x)$