school nova™

1. A musketeer has three beautiful hats, four elegant tabards, and two pairs of excellent boots. How many different costumes can he wear? (tabard - a sleeveless jerkin consisting only of front and back pieces with a hole for the head.

2. Mom has an apple, a banana, a pear, a peach and an apricot to give to her kid for lunch. How many different ways are there for her to do it during one week?

3. Mom has two apples, a banana, a peach, and an apricot to give to her kid for lunch. How many different ways are there for her to do it during one week? (Apples are identical)

4. Mary and Paula have to mail 1000 envelopes for a new marketing campaign. Mary can do the job alone in 6 hours. If Paula helps, they can get the job done in 4 hours. How long would it take Paula to do the job by herself?

5. Evaluate:

$$\left(1\frac{2}{5} + 3.5 : 1\frac{1}{4}\right) : 2\frac{2}{5} + 3.4 : 2\frac{1}{8} - 0.35 =$$

(Answer is 3) Write your solution.

6. Ratio of number of girls and number of boys is 2:3.

   a. How many girls and how many boys are there in the class, if there are 35 students altogether?

   b. How many boys are there if there are 8 girls in the class?

   c. How many girls are there if there are 15 boys in the class?

7. The Persian mathematician of the 9th century Muhammad al-Khwarizmi in his book "Arithmetic" sets the following problem:
   If you subtract one third and one quarter (*of that number*) from the number, the result is 10. Find the number.
   Solve it.