Math 5b, homework 25.

1. In how many different ways the first three places can be awarded, if 15 people participated in the competition? (Order is important).

2. How many different ways are there to create a team of 3 students out of 15 students of math class to take a participation in the math Olympiad.

3. How many grams of jam with 50% sugar should be added to 100 g of jam with 30% sugar in order to obtain jam with 35% sugar?

4. $x, y,$ and $k$ are three different digits. If all six three-digit numbers that can be created from these digits without repetition are added together, the result will be 5328. What are the digits?

5. Compare the value of the expressions with given value of variables:
   $a.\ (1+a)b \quad and \quad 1+ab, \quad if\ a=3 \quad and \quad b=2.5;$
   $b.\ (1-a)^2 \quad and \quad 1-a^2, \quad if\ a=0.1;$
   $c.\ a^2+b^2+2ab \quad and \quad (a+b)^2, \quad if\ a=1 \quad and \quad b=0.5$
   $d.\ (1+a)b \quad and \quad 1+ab, \quad if\ a=3 \quad and \quad b=2.5$