Task. In how many ways can three letter arrangments be made from the letters in the word: "computer"?

Solution. Notice that the word "computer" consists of 8 letters and all of them are distinct.

Let ABC be a three letter word where A, B and C are distinct letters from the word "computer". Then the first letter A can be choosen in 8 ways. For any choice of first letter there exists 7 choices of second letter B, and to any choice of A and B there exists 6 choices of third letter C.

Hence the number of three letter words is equal to

$$8 * 7 * 6 = 336.$$

Answer. 336.