**Задача 1. Попълнете празните места:**

* A(n)\_\_iterator\_\_\_ is used to iterate through a collection and can remove elements from the collection during the iteration.
* An element in a List can be accessed by using the element’s \_index\_\_.
* Assuming that myArray contains references to Double objects, \_autoboxing\_occurs when the statement "myArray[ 0 ] = 1.25;" executes.
* Java classes \_\_Vector\_\_ and \_\_\_ArrayList\_\_ provide the capabilities of arraylike data structures that can resize themselves dynamically.
* If you do not specify a capacity increment, the system will \_\_double\_\_ the size of the Vector each time additional capacity is needed.
* Assuming that myArray contains references to Double objects, \_\_unboxing\_\_\_ occurs when the statement "double number = myArray[ 0 ];" executes.
* Collections algorithm \_disjoint()\_ determines if two collections have elements in common

**Задача 2. Запишете вярно или грешно срещу всяко твърдение:**

* Values of primitive types may be stored directly in a collection. false
* A Set can contain duplicate values. false
* A Map can contain duplicate keys. false
* A LinkedList can contain duplicate values. true
* Collections is an interface. false
* Iterators can remove elements. true
* A PriorityQueue permits null elements. false

**Задача 3. (Prime Numbers and Prime Factors)**

Напишете програма, която взема цяло число от потребител и определя дали е просто. Ако числото не е просто, разложете го на прости множители и покажете всеки един от тях по веднъж. Например числото 54 = 2 \* 3 \* 3 \* 3. За числото 54 изходните коефициенти трябва да бъдат 2 и 3.