

## Number of distinct

Given a list of integers, count how many distinct numbers it has.

<code>numbers = input()</code>	"1 2 3 2 1"
<code>numbers_list = numbers.split()</code>	["1", "2", "3", "2", "1"]
<code>numbers_set = set(numbers_list)</code>	{"1", "2", "3"}
<code>numbers_length = len(numbers_set)</code>	There are 3 elements in the set
<code>print(len(a), end="")</code>	3

## Number of common

Given two lists of numbers, count how many numbers of the first one occur in the second one.

<code>listA = input().split()</code>	"1 3 2" -> ["1", "3", "2"]
<code>setA = set(listA)</code>	{"1", "3", "2"}
<code>listB = ____().____()</code>	"4 3 2" -> ["4", "3", "2"]
<code>setB = ____ (listB)</code>	{"4", "3", "2"}
<code>common = setA.intersection(setB)</code>	$\{"1", "3", "2"\} \cap \{"4", "3", "2"\} = \{"3", "2"\}$
<code>common_length = ____ ( _____ )</code>	2

## Intersection

Given two lists of numbers, find all the numbers that occur in both the first and the second list.

**Print them in ascending order.**

<code>listA = ____().____()</code>	"1 3 2" -> ["1", "3", "2"]
<code>setB = ____ (listA)</code>	{"1", "3", "2"}
<code>listB = ____().____()</code>	"4 3 2" -> ["4", "3", "2"]
<code>setB = ____ (listB)</code>	{"4", "3", "2"}
<code>common = setA.____ (setB)</code>	$\{"1", "3", "2"\} \cap \{"4", "3", "2"\} = \{"3", "2"\}$
<code>common_sorted = sorted(common)</code>	{"2", "3"}
<code>output = " ".join(sorted)</code>	"2 3"
<code>print(output, end = "")</code>	2 3

## Seen Before

Given a sequence of numbers, scan them from left to right and for each number print YES if this number was already seen or NO if it appears for the first time.

<pre>numbersList = ____().____() seenSet = ____ ()  for num in numbersList:      if num not in seenSet:          print("____")         seenSet.add(num)      else:         print("____")</pre>	
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## Guess the Number

<pre># get "n" because answer is within 1-n (inclusive) n = int(input())  # create the potential set potentialList = [str(i) for i in range(1, n+1)] potentialSet = ____ ( potentialList )  while True:     # get set of numbers     guessList = ____ (). ____ ()     guessSet = set( ____ )      if "HELP" in guessSet:         result = " ".join(sorted(potentialSet))         print(result, end="")         break      choice = input()     if choice == "YES":         potentialSet = potentialSet._____(guessSet)      elif choice == "NO":         potentialSet = potentialSet._____(guessSet)</pre>	<p>Example input:</p> <p>10</p> <p>1 2 3 4 5 YES</p> <p>2 4 6 8 10 NO</p> <p>HELP</p> <p>Example output:</p> <p>1 3 5</p>
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