1. Create a function that takes a list containing only numbers and

return the first element.

Examples

[1, 2, 3] ➞ 1

[80, 5, 100] ➞ 80

[-500, 0, 50] ➞ -500

1. Create a function that takes a list and returns

the difference between the biggest and smallest numbers.

Examples

[10, 4, 1, 4, -10, -50, 32, 21] ➞ 82

# Smallest number is -50, biggest is 32.

[44, 32, 86, 19] ➞ 67

# Smallest number is 19, biggest is 86.

1. Create a function to concatenate two integer lists.

Examples

[1, 3, 5], [2, 6, 8] ➞ [1, 3, 5, 2, 6, 8]

[7, 8], [10, 9, 1, 1, 2] ➞ [7, 8, 10, 9, 1, 1, 2]

[4, 5, 1], [3, 3, 3, 3, 3] ➞ [4, 5, 1, 3, 3, 3, 3, 3]

1. Given a list of numbers, return True if the sum of the values

in the list is less than 100; otherwise return False.

Examples

[5, 57] ➞ True

[77, 30] ➞ False

[0] ➞ True

1. Given a list of integers, determine whether the sum

of its elements is even or odd.

The return value should be a string "odd" or "even".

If the input list is empty, consider it as a list with a zero [0].

Examples

[0] ➞ 'even'

[1] ➞ 'odd'

[] ➞ 'even'

[0, 1, 5] ➞ 'even'

1. Create a function that converts a date formatted

as MM/DD/YYYY to YYYYDDMM.

Examples

'11/12/2019' ➞ '20191211'

'12/31/2019' ➞ '20193112'

'01/15/2019' ➞ '20191501'

1. Create a function that takes two numbers as arguments num, length and

returns a list of multiples of num until the list length reaches length.

Examples

7, 5 ➞ [7, 14, 21, 28, 35]

12, 10 ➞ [12, 24, 36, 48, 60, 72, 84, 96, 108, 120]

17, 6 ➞ [17, 34, 51, 68, 85, 102]

1. EXTRA Knowledge

Given a list, rotate the values clockwise by one

(the last value is sent to the first position).

Check the examples for a better understanding.

Examples

[1, 2, 3, 4, 5] ➞ [5, 1, 2, 3, 4]

[6, 5, 8, 9, 7] ➞ [7, 6, 5, 8, 9]

[20, 15, 26, 8, 4] ➞ [4, 20, 15, 26, 8]

1. Create a function that inverts the rgb values of a given tuple.

Examples

color\_invert((255, 255, 255)) ➞ (0, 0, 0)

# (255, 255, 255) is the color white.

# The opposite is (0, 0, 0), which is black.

color\_invert((0, 0, 0)) ➞ (255, 255, 255)

color\_invert((165, 170, 221)) ➞ (90, 85, 34)

Notes

Must return a tuple.

255 is the max value of a single color channel.

1. Write a function that searches a list of names (unsorted)

for the name "Bob" and returns the location in the list.

If Bob is not in the list, return -1.

Examples

find\_bob(["Jimmy", "Layla", "Bob"]) ➞ 2

find\_bob(["Bob", "Layla", "Kaitlyn", "Patricia"]) ➞ 0

find\_bob(["Jimmy", "Layla", "James"]) ➞ -1

Notes

Assume all names start with a capital letter and are lowercase

thereafter (i.e. don't worry about finding "BOB" or "bob").

1. EXTRA Knowledge

Create a function that returns a list of strings sorted by

length in ascending order.

Examples

sort\_by\_length(["a", "ccc", "dddd", "bb"]) ➞ ["a", "bb", "ccc", "dddd"]

sort\_by\_length(["apple", "pie", "shortcake"]) ➞ ["pie", "apple", "shortcake"]

sort\_by\_length(["may", "april", "september", "august"]) ➞ ["may", "april", "august", "september"]

sort\_by\_length([]) ➞ []

Notes

Strings will have unique lengths, so don't worry about comparing

two strings with identical length.

Return an empty array if the input array is empty