Question1

Create a function that takes a list of strings and integers, and filters out the list so that it returns a list of integers only.

Examples

```
filter_list([1, 2, 3, "a", "b", 4]) ➞ [1, 2, 3, 4]

filter_list(["A", 0, "Edabit", 1729, "Python", "1729"]) ➞ [0, 1729]

filter_list(["Nothing", "here"]) ➞ []
```

Question2

Given a list of numbers, create a function which returns the list but with **each element's index in the list added to itself**. This means you add *0 to the number at index 0, add 1 to the number at index 1, etc...*

Examples

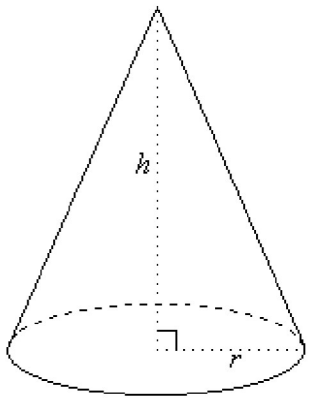
```
add_indexes([0, 0, 0, 0, 0]) ➞ [0, 1, 2, 3, 4]

add_indexes([1, 2, 3, 4, 5]) ➞ [1, 3, 5, 7, 9]

add_indexes([5, 4, 3, 2, 1]) ➞ [5, 5, 5, 5, 5]
```

Question3

Create a function that takes the height and radius of a cone as arguments and returns the volume of the cone rounded to the nearest hundredth. See the resources tab for the formula.



Examples

```
cone_volume(3, 2) ➞ 12.57
```

```
cone_volume(15, 6) ➞ 565.49

cone_volume(18, 0) ➞ 0
```

Question4

This Triangular Number Sequence is generated from a pattern of dots that form a triangle. The first 5 numbers of the sequence, or dots, are:

```
1, 3, 6, 10, 15
```

This means that the first triangle has just one dot, the second one has three dots, the third one has 6 dots and so on.

Write a function that gives the number of dots with its corresponding triangle number of the sequence.

Examples

```
triangle(1) ➞ 1

triangle(6) ➞ 21

triangle(215) ➞ 23220
```

Question5

Create a function that takes a list of numbers between 1 and 10 (excluding one number) and returns the missing number.

Examples

```
missing_num([1, 2, 3, 4, 6, 7, 8, 9, 10]) ➞ 5

missing_num([7, 2, 3, 6, 5, 9, 1, 4, 8]) ➞ 10

missing_num([10, 5, 1, 2, 4, 6, 8, 3, 9]) ➞ 7
```