

Short Functions for Calculation between Array and Scalars

Write these functions that work like the name or comment below.

```
import numpy as np

def toCelsius(f):
    # f is a 1-d array storing temperatures in Fahrenheit
    # returns 1-d array storing the converted temp. from f in Celsius

def BMI(wh):
    # wh is a 2-d array of size n×2 storing weight (in kg) and height (in cm)
    # of the nth person. 0th column stores weight, 1st column stores height
    # returns 1-d array storing body mass index of everyone in wh

def distanceTo(p, Points):
    # p is a 1-d array with size=2 representing an x, y coordinate
    # 0th index stored the coordinate of x, 1st index stored the coordinate of y
    # Points is a 2-d array of size n×2. Storing coordinates of all n points
    # returns 1-d array with the size of n. The array stores distance from p
    # to each point in Points.

exec(input().strip()) # must have this line when submitting to grader
```

$$BMI = \frac{weight_{(in\ Kg.)}}{height^2_{(in\ m.)}}$$

Input

Python code for the functions.

Output

The results after executing code.

Example

Input (from keyboard)	Output (on screen)
print(toCelsius(np.array([32,212])))	[0. 100.]
print(BMI(np.array([[60,170],[50,160]])))	[20.76124567 19.53125]
print(distanceTo([0,0],np.array([[3,0],[0,4],[3,4]])))	[3. 4. 5.]