

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 nx2 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
```

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

```
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 with the size of nx2: Storing the coordinate
    # 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
```

Input

Python code for the functions

Output

The results after executing code.

Example

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