To do these exercises you may need to “look things up”. Remember that google is your best friend.

**Exercise 1**
Write a function $f(a, b)$ which takes two one dimensional numpy arrays $a$ and $b$ and returns an array of the same dimension as $a$ with booleans that “flag” each element of $a$ as present or not present in $b$. For example

```python
a = np.array([23, 1, 43, 6, 7, 43])
b = np.array([2, 7, 43])
c = f(a, b)
```

should have the array $c$ set to `[False, False, True, False, False, True]`

**Exercise 2**
Write a function that returns the number of positive and $> 0$ elements of a one dimensional numpy array. Test it in a few cases.

**Exercise 3**
Write a function that sets all the negative elements of a one dimensional numpy array to zero. Test it in a few cases.

**Exercise 4**
Generate 5 random numbers between 20 and 50.

**Exercise 5**
Generate 5 random number from a Gaussian distribution of mean 6 and standard deviation 3.