NAME: Answers

1. Define a Python function $\text{norm}$ that takes as input a one-dimensional array $x$ of $n$ floats and returns its norm computed as

$$\sqrt{x_0^2 + x_1^2 + \cdots + x_{n-1}^2}.$$ 

The only input argument of $\text{norm}$ is $x$.

```python
from numpy import *

def norm(x):
    """return norm of float array x
    ""
    from math import sqrt
    sum = 0
    for i in range(0,x.shape[0]):
        sum = sum + x[i]**2
    return sqrt(sum)
```

2. In a Python session, using $\texttt{numpy.linalg}$ solve the linear system

$$\begin{align*}
2x_1 + 3x_2 &= 9 \\
4x_1 + 5x_2 &= 7.
\end{align*}$$

Give not only the result, but also all relevant Python commands.

```python
>>> from numpy import *
>>> A = array([[2,3],[4,5]])
>>> b = array([[9],[7]])
>>> x = linalg.solve(A,b)
>>> x
array([[ -12.],
        [  11.]])
```