

```
In [1]: import numpy as np
        from numpy import array
        from numpy import trace
```

```
In [4]: x = array([[2],[6]])
        y = array([[1],[0]])

        print(x.dot(x.T))
        print((x.T).dot(y))
```

```
[[ 4 12]
 [12 36]]
[[2]]
```

```
In [5]: print(x.dot(y.T))
```

```
[[2 0]
 [6 0]]
```

```
In [6]: Y = array([[2,4],[1,0]])
        X = array([[7,5],[3,6]])

        print(X*Y)
```

```
[[14 20]
 [ 3  0]]
```

```
In [15]: print(2*X+2*Y + ((X.T).dot(Y)))
```

```
[[35 46]
 [24 32]]
```

```
In [16]: print(Y.dot(Y.T))
```

```
[[20  2]
 [ 2  1]]
```

```
In [19]: Z = array([[4,-1,0],[1,1,1]])
        print(Z.dot(Z.T).dot(x))
```

```
[[52]
 [24]]
```

```
In [ ]:
```

