In [1]:
```
import numpy as np
```

In [2]:
```
w = np.array([-2,1,3])/np.sqrt(14)
w
```

Out[2]:
```
array([-0.53452248,  0.26726124,  0.80178373])
```

In [3]:
```
np.linalg.norm(w) # Euklidsk norm
```

Out[3]:
```
1.0
```

In [4]:
```
# Vil finne u,v slik at {u,v,w} er en positiv ortonomert basis
```

In [5]:
```
v = np.array([1,2,0])/np.sqrt(5)
v
```

Out[5]:
```
array([0.4472136 , 0.89442719, 0.        ])
```

In [6]:
```
np.dot(v,w)
```

Out[6]:
```
0.0
```

In [7]:
```
u = np.cross(v,w)
u
```

Out[7]:
```
array([ 0.71713717, -0.35856858,  0.5976143 ])
```

In [8]:
```
# Vi danner matrisen som har u,v,w som søyler:
A = np.array([u,v,w]).T
```

In [9]:
```
np.linalg.det(A)
```

Out[9]:
```
1.0000000000000002
```

In [10]:
```
# Vi sjekker at A er ortogonal:
B = np.dot(A.T,A) - np.eye(3)
np.linalg.norm(B) # Den Euklidske normen til B betraktet som element av R^
```

Out[10]:
```
2.5404854016694493e-16
```

In [ ]:
```

```