

Poročilo 6 – Skalarni produkt

Naloga 1

Korelacijski faktor sem izračunal s pomočjo programa mathematica. Stolpca podatkov sem označil kot vektorja in nato uporabil ukaz »Correlate«.

```
In[23]:= v1 = ReadList["vektor1.txt"]
Out[23]= {4.42, 4.83, 4.93, 5.15, 5.28, 5.46, 5.62, 5.75, 6.71}

In[24]:= v2 = ReadList["vektor2.txt"]
Out[24]= {2.55, 2.78, 2.81, 3.01, 3.26, 3.3, 3.48, 3.69, 4.8}

In[26]:= v1.v2
Out[26]= 162.267

In[27]:= Correlation[v1, v2]
Out[27]= 0.98797
```

Korelacijski faktor je: 0.98797.

Naloga 2

Enak postopek kot pri prejšnji nalogi.

```
In[31]:= v1 = ReadList["tt1.txt"]
Out[31]= {16, 0, 0, 0, 24, 31, 0, 27, 15, 35, 26, 0, 19, 0, 0,
          0, 0, 28, 30, 19, 0, 18, 20, 29, 16, 0, 18, 0, 0, 27, 0, 0}

In[32]:= v2 = ReadList["tt2.txt"]
Out[32]= {16, 12, 19, 9, 15, 14, 13, 8, 11, 12, 15, 16, 8, 18, 15, 25,
          15, 13, 12, 11, 19, 21, 17, 12, 21, 20, 16, 19, 14, 11, 13, 17}

In[33]:= Correlation[v1, v2]
In[34]:= -  $\frac{1983 \sqrt{\frac{5}{438053}}}{17}$ 
```

Korelacijski koeficient je približno -0.39.

Naloga 3

Naloga 4