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# EDL207G Verk 3

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Lögmál Ohm og geislunarafl ljósaperu

## 2 TILRAUN

### 2.1

#### 1 & 2

Rað tengd viðnám

```
tblrað =  
2x4 string array  
"Amper"      "0.004767"    "+-"    "4.767e-05"  
"Voltage"    "0.955"        "+-"    "0.00955"
```

Hlið tengd viðnám

```
tblhlid =  
2x4 string array  
"Amper"      "0.01659"    "+-"    "0.0001659"  
"Voltage"    "0.831"      "+-"    "0.00831"
```

#### 3 & 4

```
tbl =  
3x4 string array  
" "          "Mælt viðnám"    "Óvissa"    "útreiknað viðnám"  
"Rað Tengd"  "200.3356"      "4.0067"    "200"  
"Hlið Tengd" "50.0904"       "1.0018"    "50"
```

### 5

```
tbl =
```

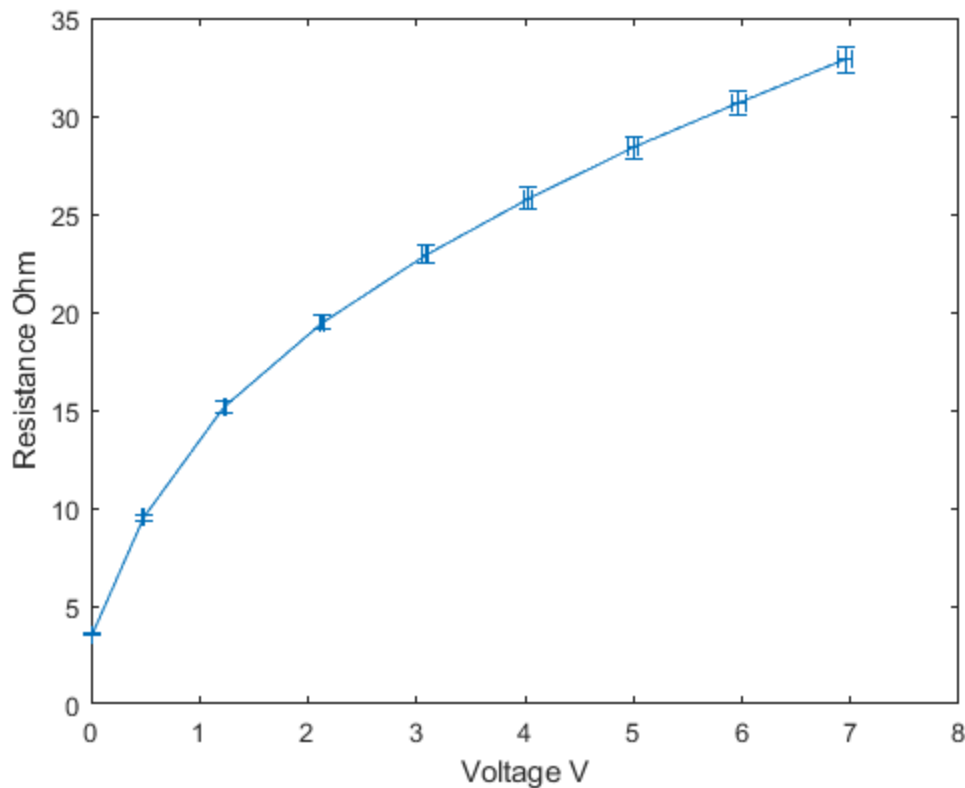
```
3x3 string array
" "      "Afl"      "Óvissa"
"Rað tengd"  "0.0045525"  "9.105e-05"
"Hlið tengd"  "0.013786"   "0.00027573"
```

meira í hliðtengdu

## 2.2

volt plan 0,1,2,3,4,5,6,7,8

```
tbl =
10x6 string array
Columns 1 through 5
"Spenna"      "Óvissa"      "Straumur"      "Óvissa"      "Viðnám"
"0.0106"      "0.000106"    "0.002983"      "2.983e-05"    "3.55347"
"0.48"        "0.0048"      "0.05051"       "0.0005051"   "9.50307"
"1.229"       "0.01229"     "0.08095"       "0.0008095"   "15.1822"
"2.13"        "0.0213"     "0.10938"       "0.0010938"   "19.4734"
"3.081"       "0.03081"     "0.13434"       "0.0013434"   "22.9343"
"4.03"        "0.0403"     "0.15612"       "0.0015612"   "25.8135"
"5"           "0.05"        "0.17607"       "0.0017607"   "28.3978"
"5.97"        "0.0597"     "0.19439"       "0.0019439"   "30.7115"
"6.95"        "0.0695"     "0.21151"       "0.0021151"   "32.859"
Column 6
"Óvissa"
"0.0710694"
"0.190061"
"0.303644"
"0.389468"
"0.458687"
"0.51627"
"0.567956"
"0.614229"
"0.657179"
```



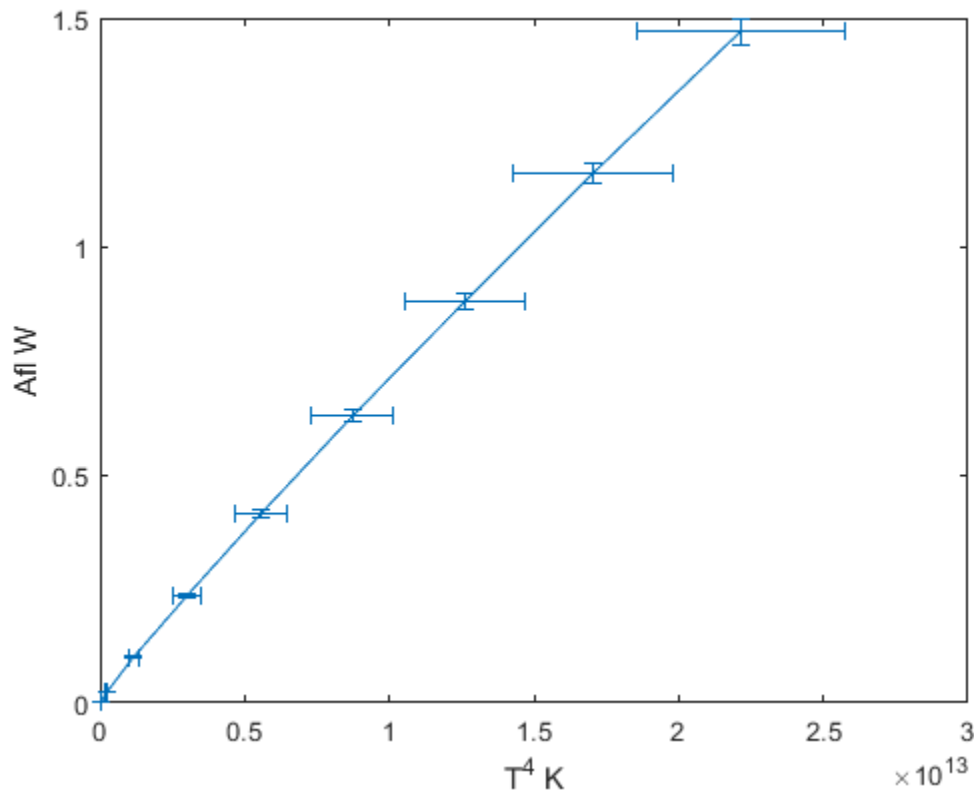
Nei, viðnám er háð spennu

## 2.3

### 1

```
tbl =
10x6 string array
Columns 1 through 3
    "Afl"          "Óvissa"          "Hiti"
    "3.16198e-05"  "6.32396e-07"    "295.75"
    "0.0242448"    "0.000484896"    "676.2743123909705"
    "0.099487550000000002"  "0.00198975100000..."  "1039.500774730182"
    "0.2329794"    "0.00465958799999..."  "1313.956234610358"
    "0.41390154000000001"  "0.00827803080000..."  "1535.311603631859"
    "0.6291636"    "0.012583272"    "1719.455002836803"
    "0.88035"      "0.017607"       "1884.742848528882"
    "1.1605083"    "0.023210166"    "2032.719860504828"
    "1.4699945"    "0.02939989"     "2170.070261733141"
Columns 4 through 6
    "Óvissa"          "Hiti^4"          "Óvissa"
    "12.83"           "7650661957.503906"  "1327580631.138125"
    "28.05097249563882"  "209166228649.5396"  "34703764548.565"
    "42.58003098920729"  "1167613934723.047"  "191311209120.9068"
    "53.55824938441432"  "2980736596647.363"  "485991937288.0196"
```

"62.41246414527434"	"5556305662264.858"	"903484939750.2316"
"69.77820011347211"	"8741043072243.749"	"1418901341853.593"
"76.38971394115529"	"12618519883827.71"	"2045743534803.724"
"82.30879442019311"	"17073011061083.76"	"2765278157338.275"
"87.80281046932565"	"22176611175006.51"	"3589135010395.297"

**2****3**

```
slope =  
    6.6330e-14  
  
blbDiam =  
    3.0000e-05  
rhoW =  
    5.6000e-08  
S =  
    4.2273e-06  
  
steffBoltz =  
    5.6704e-08  
epsilon =  
    2.7671e-01  
  
slopeError =
```

$1.2066e-14$

*Serror* =

$8.4547e-08$

*epsilonError* =

$5.5870e-02$

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