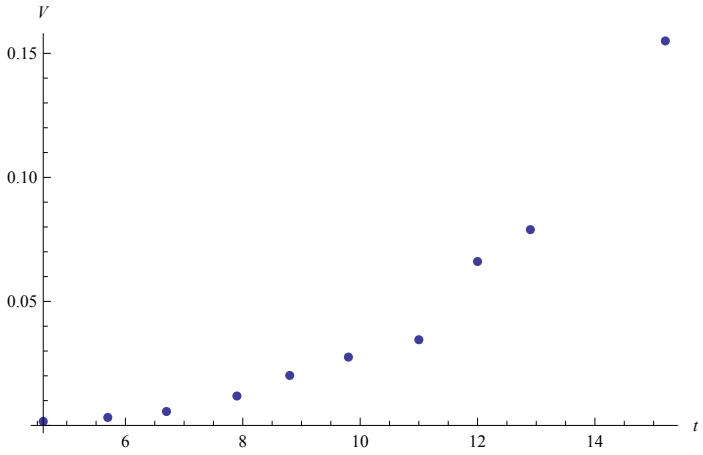
Učitamo podatke

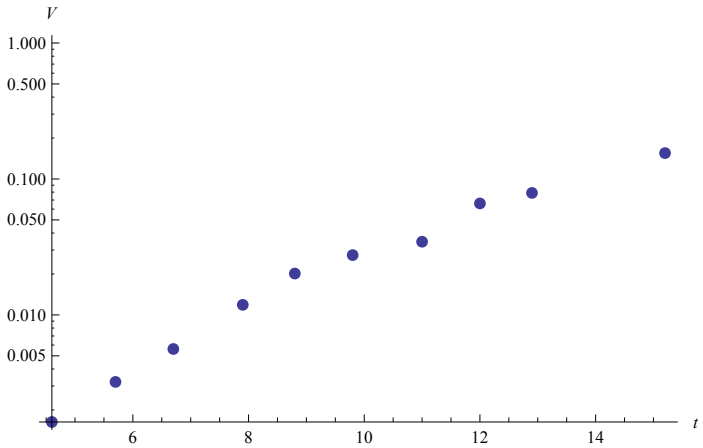
```
data = Import["C:\\Users\\Mira\\Desktop\\data1.xlsx"]
```

```
{{{4.6, 0.0016308}, {5.7, 0.0032148},
  {6.7, 0.005614}, {7.9, 0.0118598}, {8.8, 0.02015}, {9.8, 0.027538},
  {11., 0.034546}, {12., 0.06608}, {12.9, 0.078932}, {15.2, 0.155}}}
```

```
ListPlot[data, AxesLabel → {t, V}]
```




```
ListLogPlot[data, AxesLabel → {t, V}]
```



želimo doći do točaka oblika (x, lny)

data

```
{{{4.6, 0.0016308}, {5.7, 0.0032148},
  {6.7, 0.005614}, {7.9, 0.0118598}, {8.8, 0.02015}, {9.8, 0.027538},
  {11., 0.034546}, {12., 0.06608}, {12.9, 0.078932}, {15.2, 0.155}}}
```

```
data1 =
 Transpose[{{{4.6, 0.0016308}, {5.7, 0.0032148}, {6.7, 0.005614}, {7.9, 0.0118598},
    {8.8, 0.02015}, {9.8, 0.027538}, {11., 0.034546}, {12., 0.06608},
    {12.9, 0.078932}, {15.2, 0.155}}}, {2, 3, 1}]
```

```
{{{4.6, 5.7, 6.7, 7.9, 8.8, 9.8, 11., 12., 12.9, 15.2}},
 {{0.0016308, 0.0032148, 0.005614, 0.0118598,
   0.02015, 0.027538, 0.034546, 0.06608, 0.078932, 0.155}}}
```

```
data2 = data1[[2]]
```

```
{{0.0016308, 0.0032148, 0.005614, 0.0118598,
  0.02015, 0.027538, 0.034546, 0.06608, 0.078932, 0.155}}
```

```
data3 = Log[data2]
```

```
{{-6.41868, -5.73999, -5.18249, -4.4346,
  -3.90455, -3.59219, -3.36546, -2.71689, -2.53917, -1.86433}}
```

```
data4 = {data1[[1]], data3}
```

```
{{{4.6, 5.7, 6.7, 7.9, 8.8, 9.8, 11., 12., 12.9, 15.2}},
 {{-6.41868, -5.73999, -5.18249, -4.4346, -3.90455,
   -3.59219, -3.36546, -2.71689, -2.53917, -1.86433}}}
```

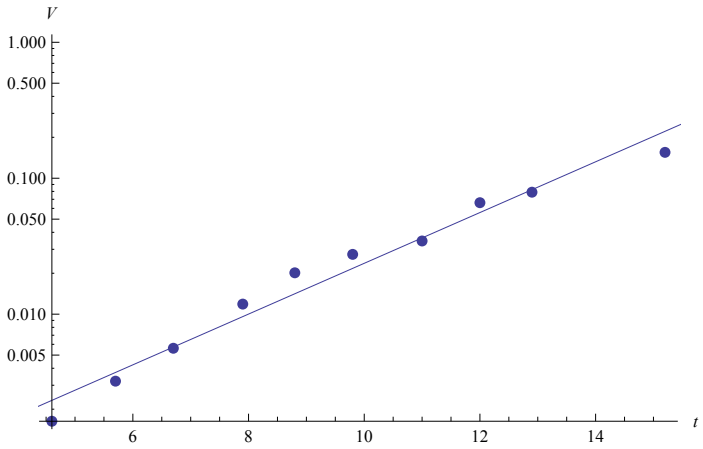
```
data5 = Transpose[%68, {3, 2, 1}]
```

```
{{{4.6, -6.41868}}, {{5.7, -5.73999}}, {{6.7, -5.18249}},
 {{7.9, -4.4346}}, {{8.8, -3.90455}}, {{9.8, -3.59219}}, {{11., -3.36546}},
 {{12., -2.71689}}, {{12.9, -2.53917}}, {{15.2, -1.86433}}}
```

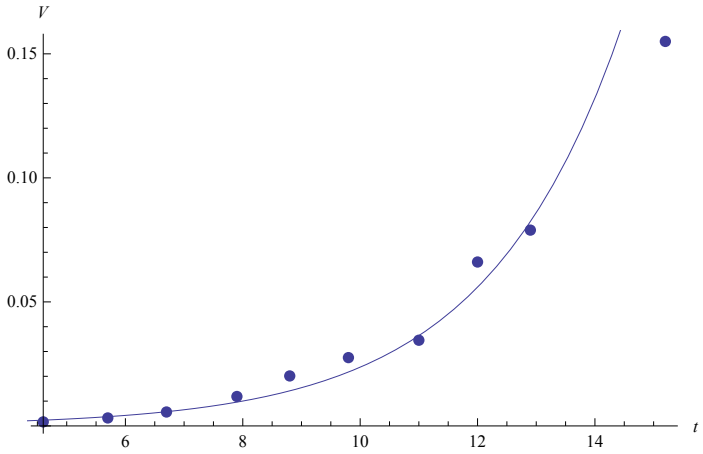
```
data5 = {{4.6, -6.41868}, {5.7, -5.73999}, {6.7, -5.18249},
   {7.9, -4.4346}, {8.8, -3.90455}, {9.8, -3.59219}, {11., -3.36546},
   {12., -2.71689}, {12.9, -2.53917}, {15.2, -1.86433}};

tražimo pravac koji najbolje opisuje zadane točke
y[x_] = Fit[data5, {1, x}, x]
```

```
-8.04273 + 0.429904 x
```

```
Show[ListLogPlot[data, AxesLabel → {t, V}],
 Plot[-8.042728189360952 + 0.4299041426385786 x, {x, 4, 16}]]
```




```
Show[ListPlot[data, AxesLabel → {t, V}],
 Plot[Exp[-8.042728189360952 + 0.4299041426385786 x], {x, 4, 16}]]
```



Za računanje vremena udvostručenja Td uzet ćemo dvije točke koje leže na pravcu. Neka su to (6.7, 0.005614) i (12.9, 0.078932).

```
t1 = 6.7;
t2 = 12.9;
V1 = 0.005614;
V2 = 0.078932;
Td
```