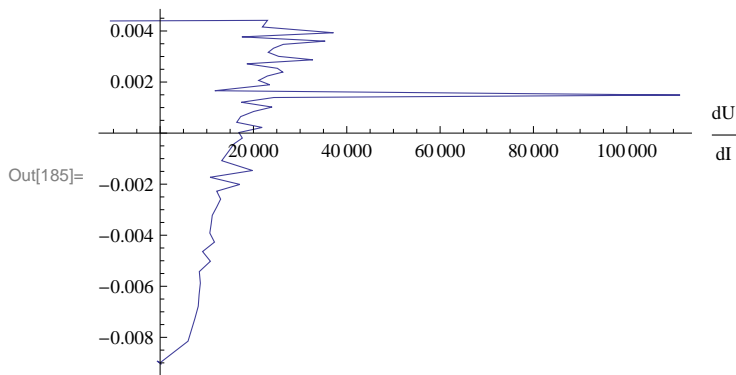


(* 5. Diferencialne Operacije
Primož Jeras *)

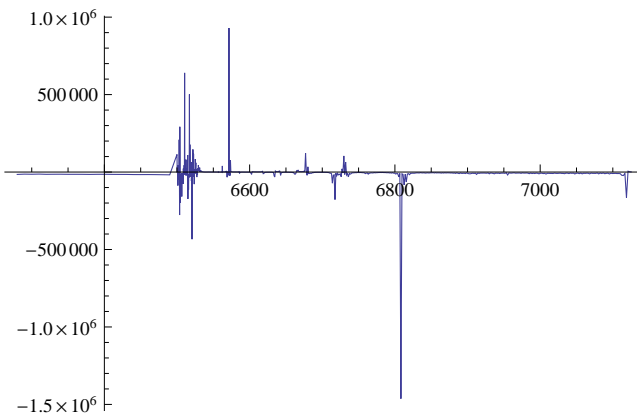
```
In[1]:= korozija = ReadList["Documents\FMF\ROvF\Tema5\Korozija.dat", {Real, Real}];
ozadje = ReadList["Documents\FMF\ROvF\Tema5\Ozadje.dat", {Real, Real}];
sinh = ReadList["Documents\FMF\ROvF\Tema5\Md29mn_00001.fio",
  {Real, Real, Real, Real, Real, Real, Real, Real, Real, Real, Real}];
```

```
In[184]:= For[i = 1; dUdI = {}, i < Count[korozija, _], i++, AppendTo[dUdI, {
  (korozija[[i + 1, 1]] - korozija[[i, 1]]) / (korozija[[i + 1, 2]] - korozija[[i, 2]]),
  (korozija[[i + 1, 2]] + korozija[[i, 2]]) / 2
}]];
ListPlot[dUdI, Joined → True, AxesLabel → {"dU" / "dI", ""}, PlotRange → All]
```



(*Graf diferencialne upornosti dU/dI*)

```
ln = {#[[1]], Log[#[[7]]] / Log[#[[8]]]} & /@ sinh;
For[i = 1; dln = {}, i < Count[ln, _], i++, AppendTo[dln, {
  ln[[i, 1]], (ln[[i + 1, 1]] - ln[[i, 1]]) / (ln[[i + 1, 2]] - ln[[i, 2]])
}]];
ListPlot[dln, Joined → True, PlotRange → All]
```



(*Strmina je največja, kjer je odvod največji, to je pri približno 6800 eV.*)

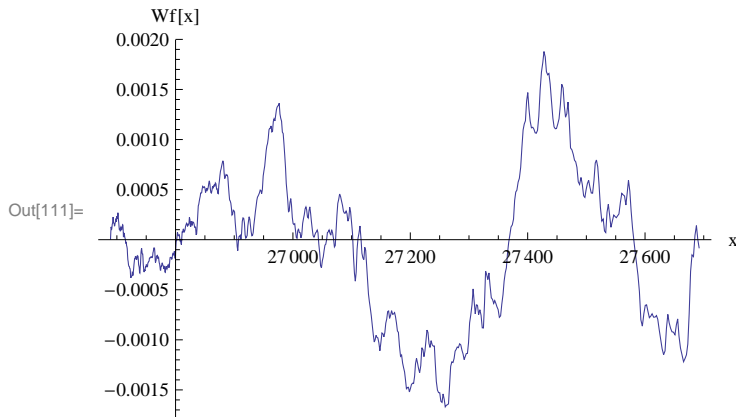
```

In[109]:= For[i = 2; Wf = {}, i < Count[ozadje, _] - 1, i++,

AppendTo[Wf, {
  ozadje[[i, 1]],
  (0.5 * (ozadje[[i, 1]] - ozadje[[i - 1, 1]]) * (ozadje[[i - 1, 2]] + ozadje[[i, 2]]))
}

]];
Wfs = Array[{Wf[[#, 1]], Sum[Wf[[i, 2]], {i, #}]} &, Count[Wf, _] - 1];
ListPlot[Wfs, Joined → True, AxesLabel → {"x", "Wf[x]"}]

```



```

In[173]:= sin = {Array[{#, Sin[#] // N} &, 25]};
sin = sin[[1]];

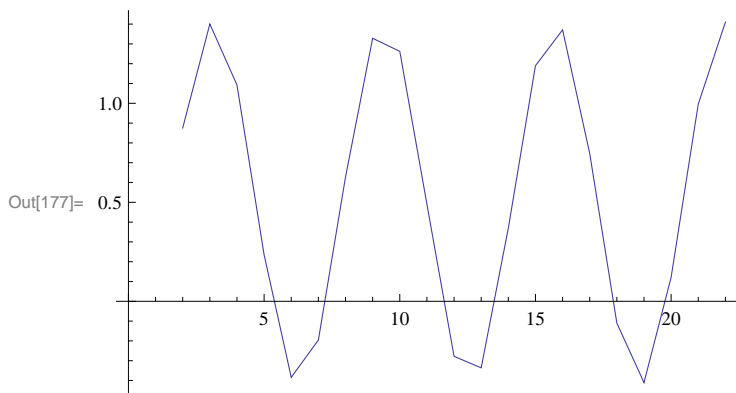
For[i = 2; Wfsin = {}, i < Count[sin, _] - 1, i++,

AppendTo[Wfsin, {
  sin[[i, 1]], (0.5 * (sin[[i - 1, 2]] + sin[[i, 2]]))
}

]];

Wfssin = Array[{Wfsin[[#, 1]], Sum[Wfsin[[i, 2]], {i, #}]} &, Count[Wfsin, _] - 1];
ListPlot[Wfssin, Joined → True]

```



(*Iz grafa je mogoce razbrati, da gre za sinusno funkcijo.*)