Notebook to support Exercise 3.4.9, modeling a cooling potato.

The data, in time/temperature pairs:

In[9]:=
```
data = {{0, 204}, {2, 193}, {4, 184}, {8, 169},
   {10, 162}, {13, 156}, {17, 149}, {20, 143}, {24, 138}, {30, 130}}
```

A plot:

In[10]:=
```
plt1 = ListPlot[data, AxesLabel → {"time (minutes)", "Temperature "}, PlotStyle → {Red}]
```

The number of data points is

In[11]:=
```
n = Length[data]
```

The temperature might be modeled by the function

In[12]:=
```
u[t_] = 72 + 132 * Exp[-k * t]
```

A least-squares function can be formed as

In[13]:=
```
SS = Sum[(u[data〚j, 1〛] - data〚j, 2〛)^2, {j, 1, n}]
```

Now adjust k to minimize this.