

A helpful notebook for Exercise 3.4.2.

Here is the data for Exercise 3.4.2:

```
In[11]:= data = {{0, 1.0}, {300, 0.78}, {1200, 0.37}, {3000, 0.08}}
```

However, we will work with the log of the concentration, so

```
In[17]:= logdata = Table[{data[[j, 1]], Log[data[[j, 2]]]}, {j, 1, 4}]
```

A plot

```
In[18]:= ListPlot[logdata]
```

To fit a function $u(k,t) = k*t$ to this data by adjusting "k", define

```
In[19]:= u[t_, k_] = k * t
```

and form sum of squares

```
In[21]:= SS = Sum[(u[logdata[[i, 1]], k] - logdata[[i, 2]])^2, {i, 1, 4}]
```

Then minimize the resulting expression SS as a function of k.