

A helpful worksheet for Exercise 3.4.1.

Here is the data for Exercise 3.4.1:

```
tvals = [0.1 0.6 1.1 1.4];  
yvals = [0.11 0.5 0.6 0.5];
```

A quick plot of (time, distance) pairs:

```
scatter(tvals,yvals)
```

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

```
syms u(a,t);  
u(a,t) = a*t;  
syms SS(a)  
SS(a) = sum((u(tvals,a)-yvals).^2);
```

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

For parts b, c, and d, do the same but with appropriate modifications to u.