Towards more difficult calculations

Defining variables

```
x = value              assign a value to the variable x
x = y = value          assign a value to both x and y
x =. or Clear[x]       remove any value assigned to x
```

```
In[1]:= x=5            Assign 5 to the variable x
Out[1]= 5
```

```
In[2]:= x^2            Whenever x appears it is replaced by 5
Out[2]= 25
```

```
In[3]:=  pi = N[Pi, 40]   Define pi to be precise to 40 digits
Out[4]=  3.141592653589793238462643383279502884197
```

Values you assign to variables are permanent. Forgetting about definitions you made earlier is the most common cause of mistakes!

Your variable definitions should always start with lower case letters, since Mathematica functions start with upper case letters.

```
In[1]:= x=.            Remove any value defined for x
```

Note:

```
x y            means x times y
xy             with no space is the variable with name xy
5x             means 5 times x
x^2y           means (x^2) y, not x^(2y)
```