1. In a MATLAB session, type in the following commands:

```matlab
>> u = [1 2 3]; v = [2 3 -1]; w = [1 0 1];
```

The volume of the parallelepiped spanned by \(u\), \(v\), and \(w\) is the absolute value of the determinant of the 3-by-3 matrix whose columns are \(u\), \(v\), and \(w\).

Give all MATLAB commands to compute this determinant using the \(u\), \(v\), and \(w\) (thus: without retyping any numbers). Give also the value you obtained.

2. Consider the \(\sqrt{x}\) for \(x \in [0, 2]\). Give all MATLAB commands for the following:

(a) Take increments of 0.1 to sample the \(\sqrt{x}\) in the interval \([0, 2]\).
(b) Take a linear fit of the \(\sqrt{x}\) using the sample points.
(c) Make a plot of \(\sqrt{x}\) and your linear equation on the same figure.

*Alternative:* On Monday 4/14, give the answers to 1.3.2,3,5 and 2.3.1,3.