## Mathematics 308 - Geometry

## Second homework - due Friday, September 19

I will talk in class about the way PostScript assignments are to be handed in.
Exercise 1. Draw in PostScript the following picture, taken from Euclid's Elements. In class I will explain how I want you to use colours.


Use variables $a, b$ here are to be variables, so to change the picture for different $a$ and $b$ you only have to change a couple of lines.

Here and elsewhere, when you are asked to reproduce a picture, you are almost always expected to reproduce its dimensions as closely as you can.
Exercise 2. Draw in PostScript a picture of the French flag (red, white, \& blue vertical stripes), with grey lines separating the different colours. Size about $4^{\prime \prime} \times 5^{\prime \prime}$, centred on a page.
Exercise 3. Draw a picture of a regular heptagon (seven sides) centred on a page, radius $1^{\prime \prime}$. Of a regular 17-gon!
Exercise 4. Write a PostScript procedure with two arguments $r$ and $\theta$ that replaces them by the corresponding $x$ and $y$.

Exercise 5. Write a PostScript procedure with a single argument $x$ that replaces it by acos $(x)$.

