Mathematics 308 — Fall 1999 — First homework

This assignment is due Friday, September 17. You should expect to be called on, along with many others from the class, to explain your solutions to this assignment. Use lots of coloured features to provide visual cues.

1. Look at Proposition I.47 of Euclid (Pythagoras' Theorem). Construct a proof made up entirely of pictures to demonstrate the line of argument.

2. Same for III.21.

The entire text of Euclid is available on the Internet at

`http://aleph0.clarku.edu/d̃joyce/java/elements/elements.html`

Other enhancements, including links to Joyce's project interleaved with links to a copy of the illustrated Euclid produced by Oliver Byrne in 1847 and excerpts from the editor's comments in the standard English translation, can be found through

`http://sunsite.ubc.ca/DigitalMathArchive/Euclid/byrne.html`

It is up to you which proofs you illustrate. A good idea is to choose the one you understand best. *The main criterion for success is transparency—the clarity of your argument.*