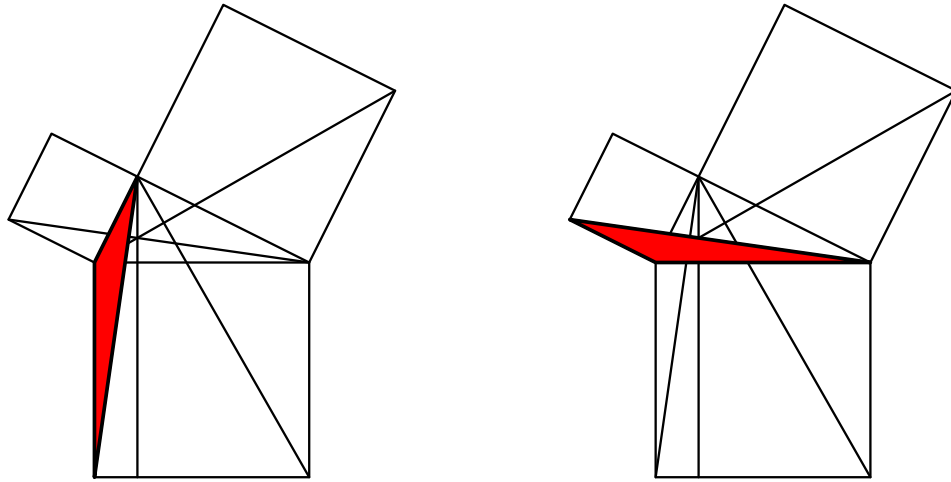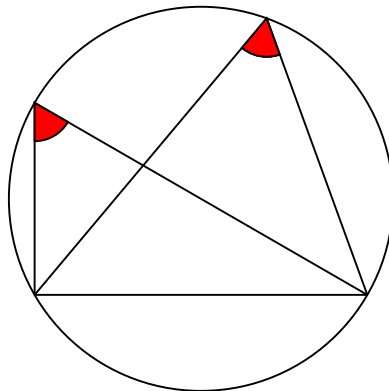## Mathematics 308 — Fall 2003

Second homework assignment — due Monday, September 22

1. Reproduce variations of these pictures in PostScript. Make about 5 snapshots, tracing in some weak way the course of Euclid's proof. Use colours to highlight ideas.

Be sure that the sides a and b are variables, as well as the angle at which the red triangle appears. Then you can get the second picture trivially from the first.

2. Also reproduce this picture:

The point here is to do things flexibly enough so that the next problem is easy.

3. The previous picture is taken from the proof of Euclid III.21. Show how a proof of this result goes, using PostScript to draw your pictures. You must include a proof of III.20, too.

4. Assemble a page-turning animation proof of Pythagoras' Theorem, maybe 20 pages altogether.