For problems 1 and 2, you will need to read parts of Euclid III. Try to read III-1 through III-32. Be sure to pay attention to III-18, III-21, and III-32.

- Using only propositions I-1 to I-32 an III-1 to III-32 prove the following. Suppose two tangents to a circle meet at a point *C*, and let *A* and *B* be the points of tangency. Then |*AC*| = |*BC*|.
- 2. Using only propositions I-1 to I-32 an III-1 to III-32 prove the following. Suppose two circles meet at point *A* and that two lines are drawn through *A* meeting one circle at *B* and *C* and meeting the other at *D* and *E*. Prove that the lines *DE* and *BC* are parallel.
- **3.** Stillwell 2.1.2
- 4. Stillwell 2.1.3
- 5. Stillwell 2.1.4
- **6.** Stillwell 2.1.5
- 7. Stillwell 2.2.2
- 8. Stillwell 2.3.1
- **9.** Stillwell 2.3.3

