We have seen the bridges-of-Königsberg graph already. Call that Graph I. Draw Graph II to include:

(a) vertices L, R, A, D, B, and

(b) edges LA, AR, LA, AR, DL, RR.

1. Is L *adjacent* to A in Graph I? Graph II?
2. Is L adjacent to R in Graph I? Graph II?
3. Is AL *adjacent* to DL in Graph I? Graph II?
4. Is AR adjacent to DL in Graph I? Graph II?
5. Find the *degree* of A in Graph I. Graph II?
6. Find the degree of D in Graph I. Graph II?
7. Find two *paths* from L to R in Graph I. Graph II?
8. Find two *circuits* in Graph I. Graph II?
9. Is Graph I *connected*? If not, what are the components (pieces)? Graph II?
10. Does Graph I contain *bridge(s)*? Explain.
11. Does Graph II contain bridge(s)? Explain.
12. Find the *loop(s)* in Graph I, if any. Graph II?
13. Find an *Euler path* in Graph II if possible. An *Euler circuit*?
14. Find an Euler path in Graph I if possible. An Euler circuit?

In the remainder of this chapter, we will use Euler's theorems to determine whether a graph has Euler paths and circuits. We will use Fleury's algorithm to actually find them.