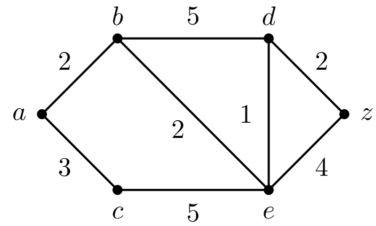
Problem §10.6 - 3: Find the length of a shortest path between a and z in the given weighted graph.



Problem §10.6 - 5: Find a shortest path between a and z in the weighted graph in Exercise 3.

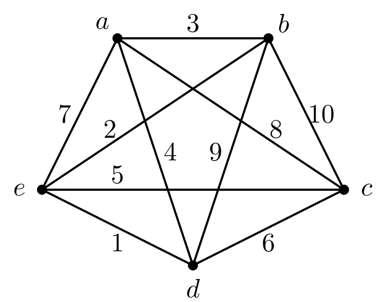
Problem §10.6 - 6: Find the length of a shortest path between these pairs of vertices in the weighted graph in Exercise 3.

(a) a and d

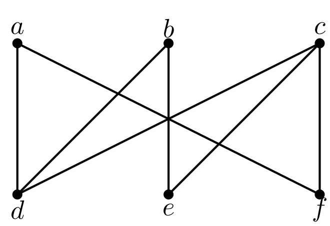
(d) b and z

Problem §10.6 - 7: Find shortest paths in the weighted graph in Exercise 3 between the pairs of vertices in Exercise 6 (parts a and d).

Problem §10.6 - 26: Solve the traveling salesperson problem for this graph by finding the total weight of all Hamilton circuits and determining a circuit with minimum total weight.



Problem §10.7 - 6: Determine whether the given graph is planar. If so, draw it so that no edges cross.



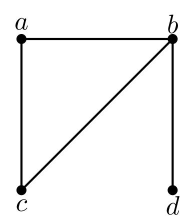
Problem §10.7 - 11: Show that K_5 is nonplanar using an argument similar to that given in Example 3.

Problem §10.7 - 13: Suppose that a connected planar graph has six vertices, each of degree four. Into how many regions is the plane divided by a planar representation of this graph?

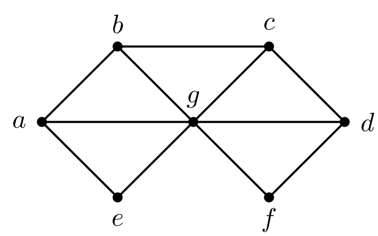
Problem §10.7 - 14: Suppose that a connected planar graph has 30 edges. If a planar representation of this graph divides the plane into 20 regions, how many vertices does this graph have?

Problem §10.8 - 1: Construct the dual graph for the map shown. (See Rosen for the map!) Then find the number of colors needed to color the map so that no two adjacent regions have the same color.

Problem §10.8 - 5: Find the chromatic number of the given graph.



Problem §10.8 - 6: Find the chromatic number of the given graph.



Problem §10.8 - 15: What is the chromatic number of W_n?

Problem §10.8 - 16: Show that a simple graph that has a circuit with an odd number of vertices in it cannot be colored using two colors.