Math 181: Quiz 3

Directions: You have 15 minutes to answer the following questions without outside resources. Turn your quiz over when you are done.

1. Use Kruskal’s Algorithm to find a minimum cost spanning tree in the graph below. What is the cost associated with the tree?

2. Consider the graph below.

   (a) Is this graph 1-colorable?
      No
   (b) Is this graph 2-colorable?
      No
   (c) Is this graph 3-colorable?
      Yes
   (d) Is this graph 4-colorable?
      Yes
   (e) What is the chromatic number of this graph?
      3