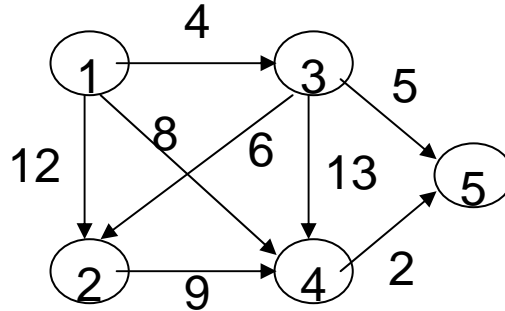


### CS4321 QUIZ 3 (Oct. 31)

**NAME** (5 points):

We're going to construct an MST and find single-source shortest paths for the graph below. ( Ignore the directions of edges for questions 1 and 2).



1. (1 point) What are the next two nodes added to the partial MST if you use Prim's algorithm and start from node 1?
2. (1 point) What are the first two edges added to the partial MST if you use Kruskal's algorithm?
3. (3 points) What are the initial values of D and P for Dijkstra's algorithm with node 1 as the source? What are the values of D and P after the first shortest path is found?