CSci 2033	Practice Exercises	Set #1	Jan 22, 2018

1 Text: Prac. Pb 1 (p.9). Set 1.1: Problems 17, 19, 25

2 Consider the traffic flow in a downtown of a city shown in the figure to the right.
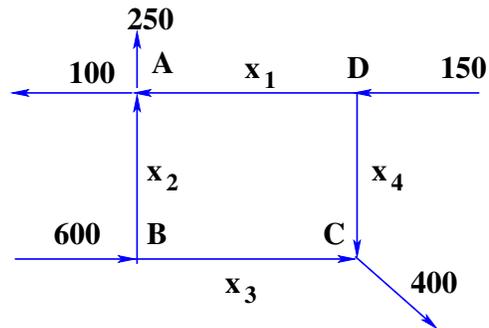
The numbers on each road entering/leaving an intersection and the variables $x_1, \cdots, x_4$ indicate the number of vechicle per hour on each of the related sections.

(a) Write a system of 4 equations satisfied by $x_1, \cdots, x_4$ - by stating that the number of vehicles entering each intersection is equal to the number of vehicles leaving it.

(b) Show that equation 4 (obtained at point D) is redundant [it can be obtained from equations 1, 2, and 3]

(c) Read lecture notes # 2 on matlab - (specifically page 2-16 and page 2-25) and enter the augmented matrix form of the system. Verify what you found in (b)