MA515 HOMEWORK #7
Due Monday, November 23

1. For each of the two digraphs below, describe (possibly sketch) the polyhedron given by

$$Ax = \begin{bmatrix} -1 \\ 0 \\ 1 \end{bmatrix} \begin{matrix} \text{vertex 1} \\ \text{vertex 2} \\ \text{vertex 3} \end{matrix}$$
$$x \geq O$$

   (a) $G(V) = \{1, 2, 3\}$, $E(G) = \{(1, 2), (2, 3), (3, 1)\}$.

   (b) $G(V) = \{1, 2, 3\}$, $E(G) = \{(1, 2), (2, 3), (1, 3)\}$.

2. Problem (Minimum-weight dipaths by linear programming), pages 77–8. (There is a typo in the book—it should say "min".)

3. Problem (Unique-circuit property), page 53.

4. Exercise (Maximum-weight spanning tree), page 58.

5. Problem (Scheduling), page 59.

6. Exercise (Scheduling), page 59.