

***Solutions Manual
to accompany***

Elementary Linear Programming with Applications

SECOND EDITION

Bernard Kolman

Drexel University

Robert E. Beck

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Chapter 0

Section 0.1, page 9

$$2. \text{ (a) } \begin{bmatrix} 4 & 2 & 1 \\ 4 & 4 & 11 \\ 4 & 4 & 4 \end{bmatrix} \quad \text{(b) } \mathbf{AB} = \begin{bmatrix} 14 & 8 \\ 11 & 6 \end{bmatrix} \quad \mathbf{BA} = \begin{bmatrix} 4 & 6 & 2 \\ 12 & 11 & 7 \\ 8 & 5 & 5 \end{bmatrix}$$

$$\text{(c) } \begin{bmatrix} 16 & -6 \\ 3 & -15 \end{bmatrix} \quad \text{(d) } \begin{bmatrix} 58 & -38 \\ 45 & -29 \end{bmatrix}$$

$$4. \text{ (a) } \begin{bmatrix} 14 & 11 \\ 8 & 6 \end{bmatrix} \quad \text{(b) } \begin{bmatrix} 38 & 12 & 50 \\ 30 & 11 & 31 \end{bmatrix} \quad \text{(c) } \begin{bmatrix} 28 & -2 \\ 21 & -10 \\ 17 & 0 \end{bmatrix}$$

$$\text{(d) } \begin{bmatrix} 23 & 22 \\ -30 & -8 \\ 8 & -20 \end{bmatrix}$$

$$8. \text{ (a) } \begin{bmatrix} 3 & 0 & 2 & 2 \\ 2 & 3 & 5 & -1 \\ 3 & 2 & 4 & 0 \\ 1 & 0 & 1 & 1 \end{bmatrix} \quad \text{(b) } \begin{bmatrix} 3 & 0 & 2 & 2 \\ 2 & 3 & 5 & -1 \\ 3 & 2 & 4 & 0 \\ 1 & 0 & 1 & 1 \end{bmatrix} \begin{bmatrix} x \\ y \\ z \\ w \end{bmatrix} = \begin{bmatrix} -8 \\ 4 \\ 6 \\ -6 \end{bmatrix}$$

$$\text{(d) } \left[\begin{array}{cccc|c} 3 & 0 & 2 & 2 & -8 \\ 2 & 3 & 5 & -1 & 4 \\ 3 & 2 & 4 & 0 & 6 \\ 1 & 0 & 1 & 1 & -6 \end{array} \right]$$