2.2.{12, 14, 26, 28, 30, 42}

2.2.12 Use elementary row operations to reduce the given matrix to (a) row echelon form and (b) reduced row echelon form.

$$\begin{bmatrix} 2 & -4 & -2 & 6 \\ 3 & 1 & 6 & 6 \end{bmatrix}$$

■

2.2.14

Use elementary row operations to reduce the given matrix to (a) row echelon form and (b) reduced row echelon form.

$$\begin{bmatrix} -2 & -4 & 7 \\ -3 & -6 & 10 \\ 1 & 2 & -3 \end{bmatrix}$$

■

2.2.26 Solve the given system of equations using either Gaussian or Guass-Jordan elimination.

$$x - y + z = 0$$
$$-x + 3y + z = 5$$
$$3x + y + 7z = 2$$

■

2.2.28

Solve the given system of equations using either Gaussian or Guass-Jordan elimination.

$$2w + 3x - y + 4z = 1$$
$$3w - x + z = 1$$
$$3w - 4x + y - z = 2$$

■

2.2.30

Solve the given system of equations using either Gaussian or Guass-Jordan elimination.

$$-x_1 + 3x_2 - 2x_3 + 4x_4 = 0$$
$$2x_1 - 6x_2 + x_3 - 2x_4 = -3$$
$$x_1 - 3x_2 + 4x_3 - 8x_4 = 2$$

■

2.2.42

For what value(s) of k, if any, will the systems have (a) no solution, (b) a unique solution, and (c) infinitely many solutions?

$$x - 2y + 3z = 2$$
$$x + y + z = k$$
$$2x - y + 4z = k^2$$