

Name:

1. For each of the following statements, write the word “true” or “false.”

(a) $xy = k$ is a linear equation, where x and y are variables and k is a constant.

(b) The following system of equations has at least one solution.

$$x + y - z = 0$$

$$3x + 2y + z = 0$$

$$x - 2y - 2z = 0$$

$$7x - y + 8z = 0$$

2. Find all solutions to the following system of equations.

$$x + y + z = 5$$

$$2x - y + z = 10$$

$$4x + y + 3z = 20$$