

Homework: Inconsistent and Dependent Systems

In Problems 1-12, use Gaussian elimination to find the complete solutions to each system of equations, or show that none exists.

1. $x + 2y - 3z = -4$ $3x - y - z = -1$ $2x + 4y - 6z = -8$	2. $2x - y - z = -3$ $x + y + 4z = 2$ $x - y + 3z = -2$
3. $x - y - z = 2$ $3x + y - 4z = -1$ $3x - 3y - 3z = 2$	4. $2x + 3y - z = -1$ $3x - y - 4z = 2$ $10x + 15y - 5z = -5$
5. $4x - y + 3z = -8$ $x - y + 2z = -3$ $x + 4y - z = -5$	6. $w - x - y + 2z = 3$ $2w + x + 3y - 2z = 4$ $2w - 2x - 2y + 4z = 6$ $w + y + z = -1$
7. $2w - 3x - y - z = -1$ $w + 4x - y + 2z = -3$ $3w - x - y - 4z = 2$ $4w - 6x - 2y - 2z = -1$	8. $3x - y - z = 2$ $5x + y - 3z = -1$
9. $x + 8y - 2z = 2$ $y + 3z = -3$	10. $4x - y - z = 3$ $x + 4z = -2$
11. $w + 3x - y - z = 2$ $w - 2x + 3y - 2z = 5$ $w - 2x - 4y - z = -3$	12. $4w - x - y - z = 1$ $w + x + 4y = 8$ $w - 3x - y - z = 7$