**Systems of Equations with 3 Variables**

1. Is the point, (2, -3, 5), the solution to the system:

2*x* + 5*y* – *z =* -16

*5x* − *y* − 3*z =* -2

*3x* + 2*y* + 4*z* = 20

1. Is the point, (-1, 3, 8), the solution to the system:

8*x* + 10*y* − *z = 14*

11*x* + 4*y* − 3*z = -23*

2*x* + 3*y* + *z* = 10

1. Is the point, (0, 3, 5), the solution to the system:

5*x* − 3*y* + 2*z = 1*

7*x* + 2*y* − *z = 1*

*x* + 4*y* − 3*z* = -3

1. Is the point, (1, -1, 1), the solution to the system:

*x* − 2*y* + 2*z = 5*

6*x* + *y* − 4*z = 1*

4*x* − 3*y* + *z* = 8

Solve the following systems in three variables using a calculator matrix.



11*x* + 15*y* + 5*z = 1*

3*x* + 4*y* + *z = -2*

7*x* + 13*y* + 3*z = 3*



2*x* + *y* + 7*z = 5*

3*x* − 2*y* − *z = -1*

4*x* – *y* + 3*z = 5*



*x* + 3*y* − 4*z = -3*

2*x* + 5*y* − 3*z = 3*

−*x* − 3*y* + *z* = -3



3*x* + 2*y* − 5*z = -8*

3*x* + 2*y* + 5*z = -8*

6*x* + 4*y* − 10*z = -16*



*x* + 2*y* − *z = -1*

2*x* + 4*y* + *z = 10*

3*x* − *y* + 8*z = 6*

*x* + *y* + *z = -3*

2*x* − *y* − *z = 6*

4*x* + *y* + *z = 0*



4*x* + *y* + 3*z = 8*

8*x* + 2*y* + 6*z = 15*

3*x* − 3*y* − *z = 5*



2*x* + 3*y* – *z = -1*

*x* − 2*y* + 3*z = -4*

−*x* + *y* − 2*z = 3*

*x* − 3*y* + 4*z = 14*

−*x* + 2*y* − 5*z = -13*

2*x* + 5*y* − 3*z = -5*



*x* + *y* + *z* = 3

*x* + *y* − *z* = 3

2*x* + 2*y* + *z* = 6