

## WORKSHEET ANSWERS - 3-SPACE REVIEW

1. KL will be a 3 x 4 matrix

$$KL = \begin{pmatrix} -7 & -20 & 14 & 5 \\ 12 & 25 & -11 & -29 \\ -1 & 5 & -9 & 18 \end{pmatrix}$$

2.  $\det M = -31$

3. Product =  $\begin{pmatrix} 1 & 0 \\ 0 & 1 \end{pmatrix}$ , therefore the matrices are inverses.

4.  $3x - 4y = 7$   
 $2x - 3y = 9$

- 5 a. These are equations of the same line, so there are infinitely many solutions.

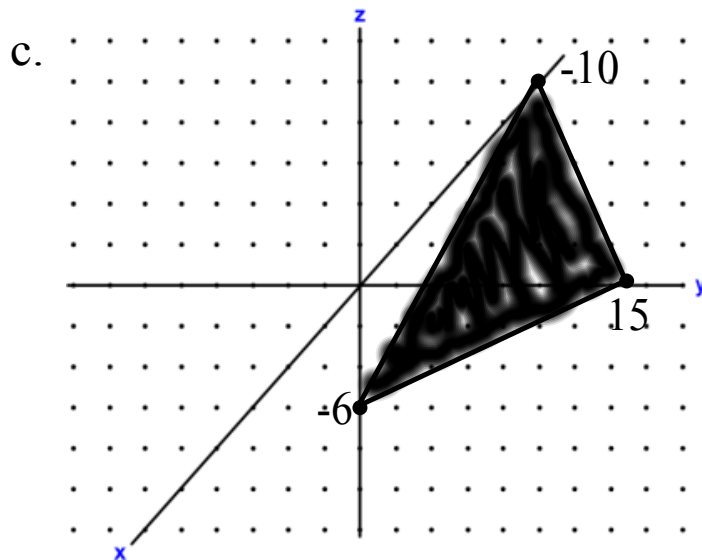
c. These are parallel lines, so there is no solution.

6.  $x = -1, y = 3$

7.  $x = -4, y = -3$

8 a.  $x\text{-int} = -10$ ,  $y\text{-int} = 15$ ,  $z\text{-int} = -6$

b.  $-3x - 5z = 30$



9. iii) Infinitely many solutions

ii) Exactly one solution

i) No solution

10. Caleb should use 4 L of the 20% solution and 1L of the 30% solution.

11. There are 17 toonies, 12 loonies, and 23 quarters in the jar.

12. She should use 1 kg of fertilizer A, 2 kg of fertilizer B, and 4 kg of fertilizer C.

13.  $x^2 + y^2 - 13x + y + 10 = 0$