Matt Fletcher Homework TODO Dr Siroj Kansakar MA244-03

$$x - y = 5$$
Problem 28. $3y + z = 13$
 $4z = 8$

Proof. Start with equation 3. Divide both sides by 4:

$$4z = 8$$

$$z = 2$$

Substitute this into the second equation:

$$3y + z = 11$$

$$3y + 2 = 11$$

$$3y = 9$$

$$y = 3$$

Substitute this into the first equation:

$$x - y = 5$$

$$x - 3 = 5$$

$$x = 2$$

$$(x, y, z) = (2, 3, 2)$$

Problem 38. $3x + 2y = 2 \\
6x + 4y = 14$

Proof. By inspection, the first equation appears to be very similar to the second. Multiply the first equation by 2:

$$6x + 4y = 4$$

However, the second equation says that 6x + 4y = 14. This set of equations is inconsistent

Problem 48TODO. $\begin{array}{rcl}
3x + 2y & = & 2 \\
6x + 4y & = & 14
\end{array}$

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$$6x + 4y = 4$$

However, the second equation says that 6x + 4y = 14. This set of equations is inconsistent