

MATH 1210 Summer 2013 Quiz 4

Surname: \_\_\_\_\_

Given Name: \_\_\_\_\_

Student ID: \_\_\_\_\_

- [7] 1. Find the equation of the plane through the points  $P(3, -1, 2)$ ,  $Q(8, 2, 4)$  and  $R(-1, -2, -3)$ .

- [4] 2. A given system (with variables  $x_1, x_2, x_3, x_4, x_5$ ) has the following matrix in reduced row-echelon form. Find basic solutions for the system.

$$\left[ \begin{array}{ccccc|c} 1 & 3 & 0 & 2 & 0 & 0 \\ 0 & 0 & 1 & -3 & 0 & 0 \\ 0 & 0 & 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \end{array} \right]$$

3. For the following system

$$2x + 5y - 4z = 6$$

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

$$3x + 8y - 5z = 14$$

[1] (a) Put the system into an augmented matrix

[5] (b) Use elementary row operations to get the matrix into reduced row-echelon form.

[3] (c) Solve the system.