

Name: _____
Student ID: _____

Quiz 10

This quiz is graded out of 10 marks. No books, calculators, notes or cell phones are allowed. You must show all your work, the correct answer is worth 1 mark the remaining marks are given for the work. If you need more space for your answer use the back of the page.

Question 1. YP pg.1 #5a (3 marks) Given the point $A(1, 2, -5)$ and the plane PL: $x + 3y + 2z - 11 = 0$. Find the parametric equations of the line passing through the point A and perpendicular to the plane PL.

Question 2. YP pg.2 #17 (4 marks) Find an equation for the plane which is perpendicular to the plane $x - y + 2z = 3$ and passes through the points $A(1, 0, 2)$ and $B(0, 1, -1)$.

Question 3. YP pg.4 #11 (3 marks) Find a vector in the plane determined by $\mathbf{u} = (1, 2, 0)$ and $\mathbf{v} = (0, 1, 2)$ such that it is orthogonal to \mathbf{v} .

Question 4. (5 marks) Solve for x

$$\begin{vmatrix} x & -1 \\ 3 & 1-x \end{vmatrix} = \begin{vmatrix} 1 & 0 & -3 \\ 2 & x & -6 \\ 1 & 3 & x-5 \end{vmatrix}$$