Determinants II

Problem Set

Problem 1. Consider the matrix X given by

$$X = \begin{bmatrix} t-5 & -2 & -4 \\ 8 & t+2 & 10 \\ 4 & 1 & t+5 \end{bmatrix}$$

Find all values of t for which X is singular.

Problem 2. Consider the system of equations given by

$$\begin{array}{rcrcrcr} -8x & - & y & + & z & = & -1 \\ -6x & + & y & + & 4z & = & 2 \\ -x & + & y & - & 5z & = & -5 \end{array}$$

Use Cramer's rule to solve this system.