PROBLEM SHEET 5

(1)(a) $x_1 = -2,\ x_2 = 5$

(b) $x_1 = -\frac{1}{2},\ x_2 = \frac{1}{2}$

(c) $x_1 = -3,\ x_2 = 0$

(d) $x_1 = -2,\ x_2 = 1,\ x_3 = 2$

(e) $x_1 = -2,\ x_2 = 0,\ x_3 = 1,\ x_4 = 2$

(2) $\forall x \in \mathbb{R} \setminus \{-1, 0, 1\}$

(3) $p(x) = 1,\quad q(x) = -(5x+3),\quad r(x) = x^2 + 5x + 3$

(4) $p(x) = x - 1,\quad q(x) = -(x-1),\quad r(x) = x^3 + x^2 + 1$

(5) $p_1(x) = x^2 - x + 1,\quad p_2(x) = x^2 + x + 1$

(6) proof