(c) Find the values of k such that $q(x) = k$ has exactly one solution. [3]

7 Solve the equation $6x^{\frac{1}{3}} - 2x^{-\frac{1}{3}} - 1 = 0$. Give your answers in exact form. [4]

8 The first three terms, in descending powers of x, in the expansion of $\left(2x^2 - \frac{1}{4x}\right)^n$ can be written in the form $256x^{16} + ax^{13} + bx^c$, where n, a, b and c are integers. Find the values of n, a, b and c. [6]