Question 2 **(6 marks)**

Consider $f(z) = 2z^3 - 5z^2 + 4z - 10$ where z is a complex number.

(a) Show that $(z - \sqrt{2}i)$ is a factor of $f(z)$. (2 marks)

(b) Given that $(z - \sqrt{2}i)$ is a factor of $f(z)$, state another factor of $f(z)$. (1 mark)

(c) Solve the equation $2z^3 - 5z^2 + 4z - 10 = 0$. (3 marks)