59 $f(x) = x^3 - x^2 - 7x + 7$

(a) If $\frac{p}{q}$ is a rational zero, then $p$ is a factor of 7, which are $\pm 1$, and $\pm 7$ and $q$ is a factor of 1, which are $\pm 1$. Thus, any rational zero must be in the list $\pm 1$ or $\pm 7$. By evaluating $f(x)$ at each of these values, we find that the only rational zero is 1.

(b) In order to find the complete factored form of $f(x)$ we need to divide the factor $(x-1)$ into $x^3 - x^2 - 7x + 7$ using synthetic division.

$$\begin{array}{r|rrrr} \underline{1} & 1 & -1 & -7 & 7 \\ & & 1 & 0 & -7 \\ \hline & 1 & 0 & -7 & 0 \end{array}$$

Thus, $x^3 - x^2 - 7x + 7 = (x-1)(x^2 - 7)$. The complete factored form is

$$f(x) = (x-1)(x-\sqrt{7})(x+\sqrt{7}).$$