Problem 1. (4 points) Find a vector equation for the line segment from the point $(6, -1, 9)$ to the point $(7, 6, 0)$.

Problem 2. (6 points) Consider the quadric surface given by the equation
\[ \frac{x^2}{9} + \frac{y^2}{25} + \frac{z^2}{4} = 1. \]

(a) Identify the type of (two-dimensional) curve given by the traces $x = 0, y = 0,$ and $z = 0$.
(b) Use the information from part (a) to classify the surface.
(c) Sketch a graph of the surface.