1. Reduce the equation to one of the standard forms, classify the surface, and sketch it.
$$x^2 - y^2 - z^2 + 2x - 6z - 8 = 0.$$

2. *True / False?* Consider a space curve given by the vector equation $\mathbf{r}(t)$. If all of its projections onto $xy$-plane, $yz$-plane and $xz$-plane are smooth, then the curve itself must be smooth.

3. *True / False?* One of the ways to visualize a space curve is to show it on a surface.