1. Describe the surface: \[ 2x^2 + 2y^2 + 2z^2 - 2x - 3y + 5z - 2 = 0 \]

2. Find the distance from the point \((-7, 5, -3)\) to the \(xz\)-plane and \(y\)-axis.
1. For the curve $r = 3\cos 6\theta$, find slope of the tangent line at $\theta = \frac{\pi}{3}$.

2. Describe the region $R = \{(x, y, z) : x^2 + y^2 + z^2 \geq 49\}$ geometrically in space.
1. Show complete procedure to draw the polar curve $r = 2 - 2 \cos \theta$. Also find arc length of this curve.
1. Find Polar coordinates of all points at which the curve \( r = 5 \sin \theta \) has a horizontal or a vertical tangent line.