In each one of the following problems you have to draw the object under study and the region of integration.

**Problem 1.** A thin bar (1D) is represented by the points
\[ \{(x, y) : -1 \leq x \leq 1, y = 0\} \]
If its density (mass per unit of length) is given by \( \rho(x) = 1 + x^2 \), find its mass.

**Problem 2.** A circular lamina (2D) is represented by the points
\[ \{(x, y, z) : x^2 + y^2 \leq 1, z = 0\} \]
If its density (mass per unit of area) is given by \( \rho(x, y) = 1 + x^2 + y^2 \), find its mass.

**Problem 3.** A solid cylinder (3D) is represented by the points
\[ \{(x, y, z) : z^2 + y^2 \leq 1, -1 \leq x \leq 1\} \]
If its density (mass per unit of volume) is given by \( \rho(x, y, z) = 1 + x^2 \), find its mass.