

Level Curves and Surfaces

Concepts

Topics covered are:

1. Level Curve and Surface

Level Curve and Surface

A level, in general, suggests something is *even* or *flat*.

Level Curve	Level Surface
A curve that results in a constant value at every point on it.	A surface that results in a constant value at every point on it.
2D graph, hence dependent on 2 variables at most	3D graph, hence dependent on 3 variables at most
Example: $x^2 + y^2 = c \quad \forall (x, y) \in \mathbb{R} \times \mathbb{R}$	Example: $x^2 + y^2 + z^2 = c \quad \forall (x, y, z) \in \mathbb{R} \times \mathbb{R} \times \mathbb{R}$