## Question

How do you graph this point $\mathrm{y}=4$

## Answer

There are 3 possible cases of graphing $y=4$.
In 1-dimentional space (line) it is graphed as a point (marked by blue rhombus in figure below)


In 2-dimentional space (plane) in rectangular coordinates (Cartesian coordinates) $\mathbf{y}=\mathbf{4}$ is graphed as a straight horizontal line (blue line in figure below). The expression $\mathbf{y}=\mathbf{4}$ means that $\mathbf{y}$ does not depend on $\mathbf{x}$ and is equal 4 whatever $\mathbf{x}$.


In 3-dimentional space (volume) in rectangular coordinates $\mathbf{y}=\mathbf{4}$ is graphed as a flat plane parallel to $\mathbf{x - z}$ surface. The expression $\mathbf{y}=\mathbf{4}$ in this case means that $\mathbf{y}$ does not depend on $\mathbf{x}$ and $\mathbf{z}$ and is equal 4 whatever $\mathbf{x}$ and $\mathbf{z}$.


