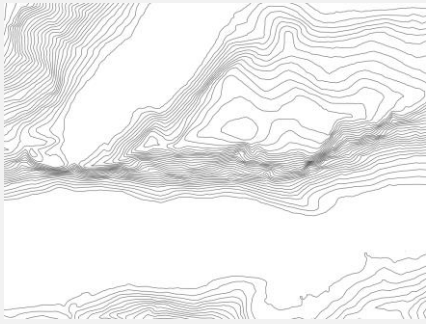


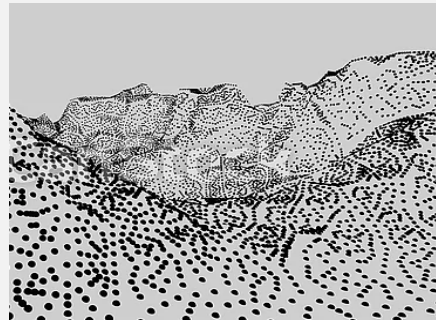
ALGUNOS CONCEPTOS EN ANÁLISIS DE SUPERFICIE Y MODELAMIENTO ESPACIAL

Profesor Rodolfo Franco
<http://mixdyr.wordpress.com/>

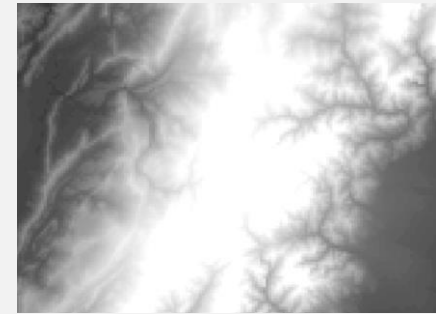
OBTENCIÓN DE UNA SUPERFICIE



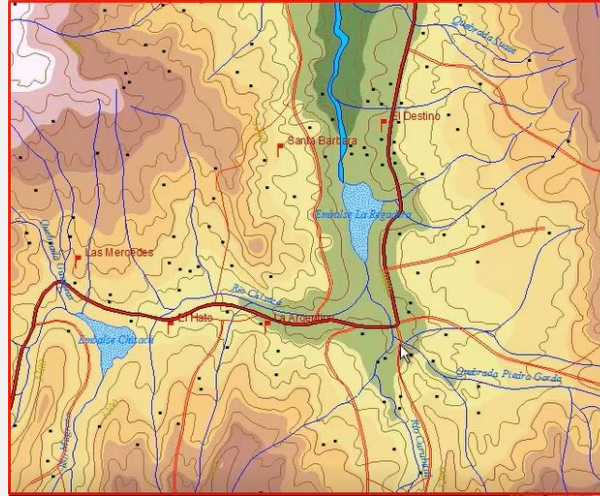
Desde Curvas de Nivel



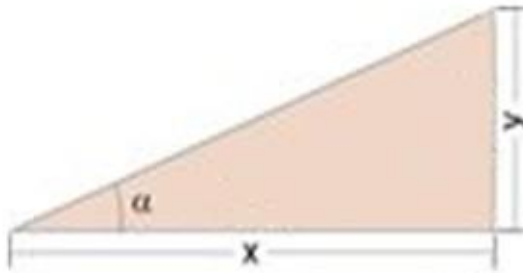
Desde nube de puntos



Desde un DEM descargado

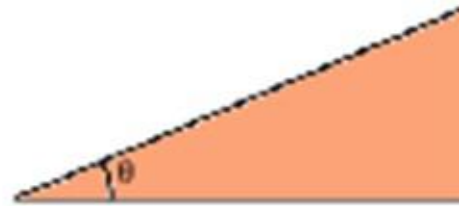


PENDIENTES



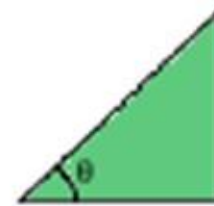
$$\text{Percentage} = \frac{y}{x} \times 100$$

$$\text{Angle } (\alpha) = \tan^{-1}\left(\frac{y}{x}\right)$$



Degree of slope = 30

Percent of slope = 58



45

100



76

375

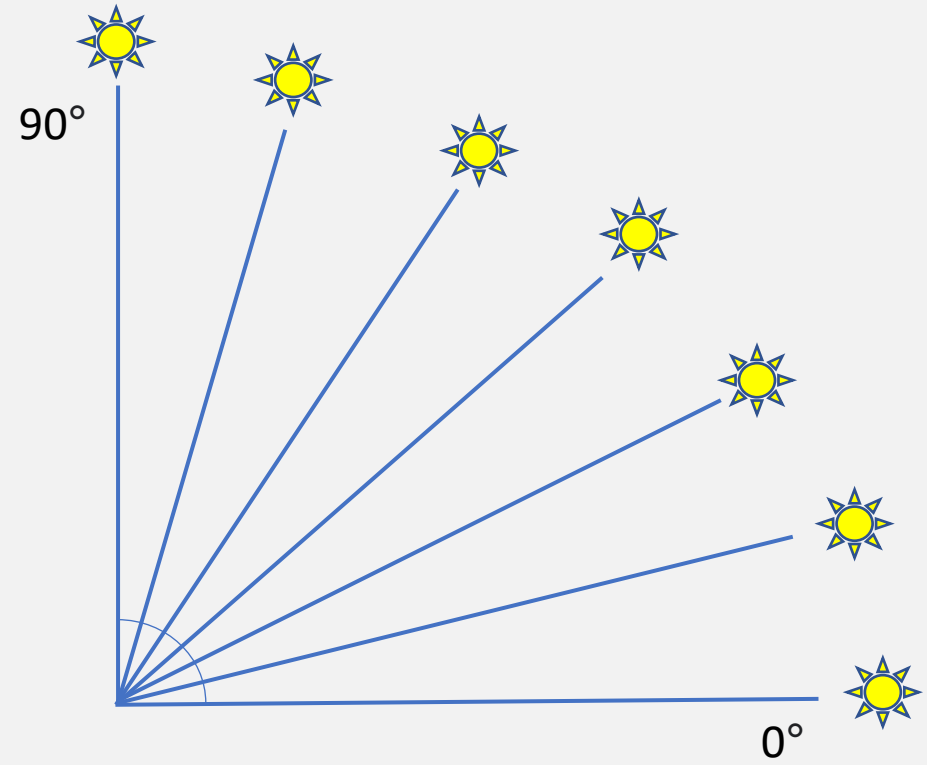
ANÁLISIS DE ASPECTO



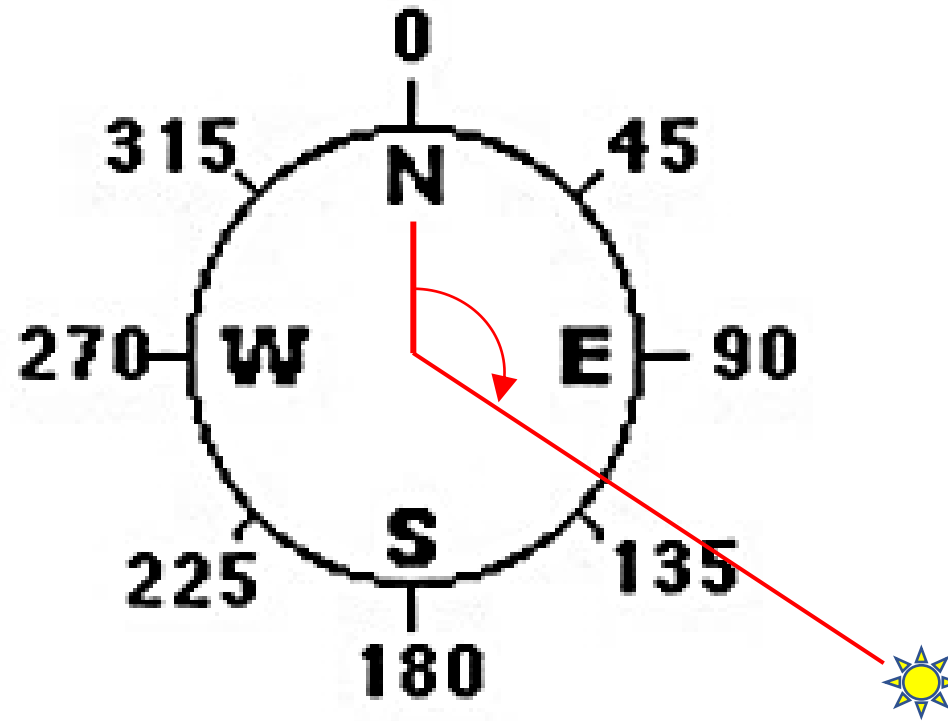
ANÁLISIS HILLSHADE



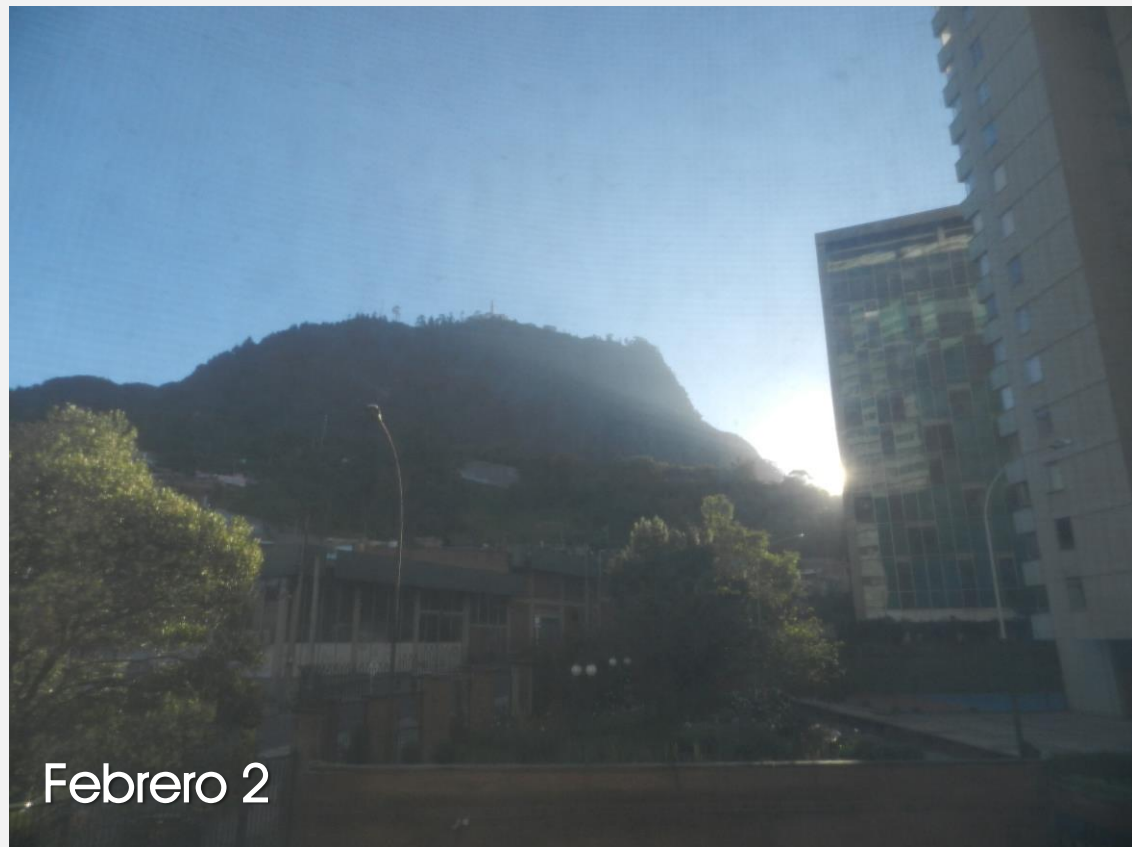
ELEVACIÓN



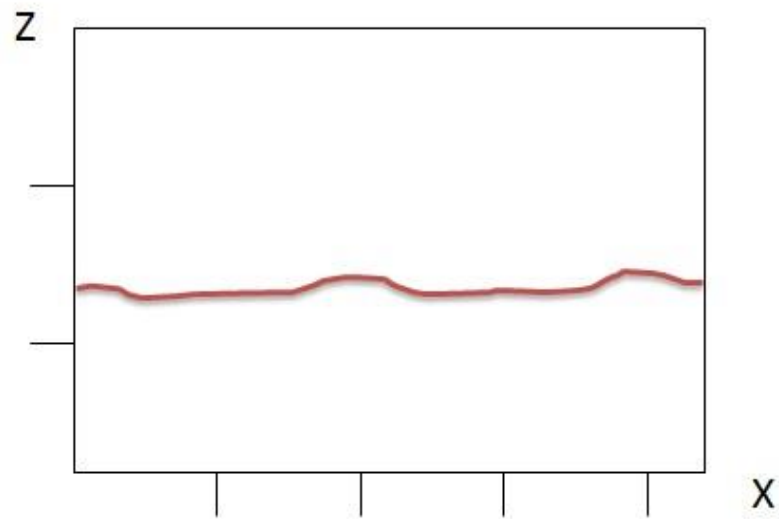
AZIMUT





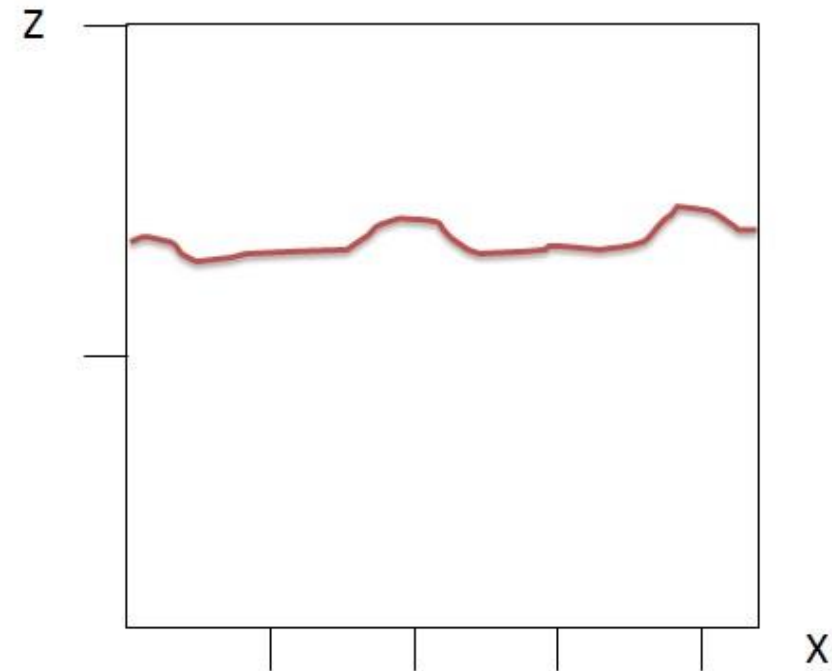


EXAGERACIÓN VERTICAL



$Z=1$

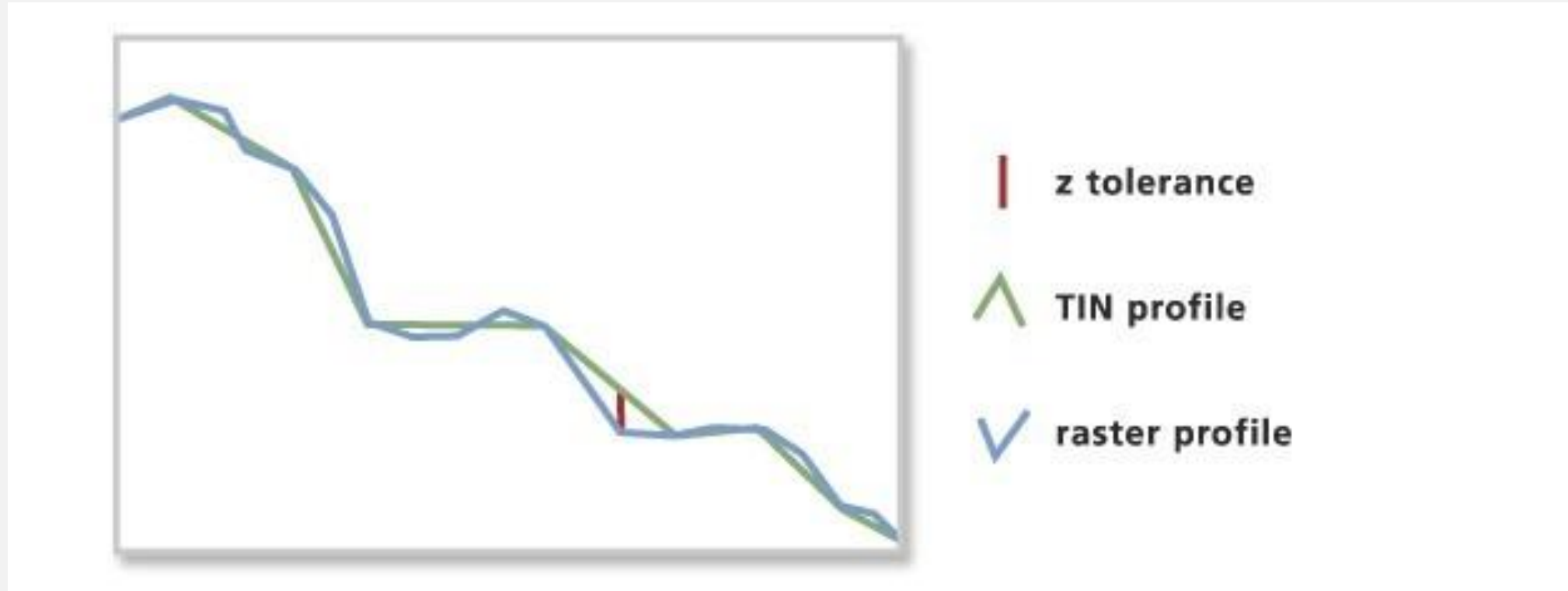
Igual dimensión de la unidad
en eje vertical respecto a eje
horizontal



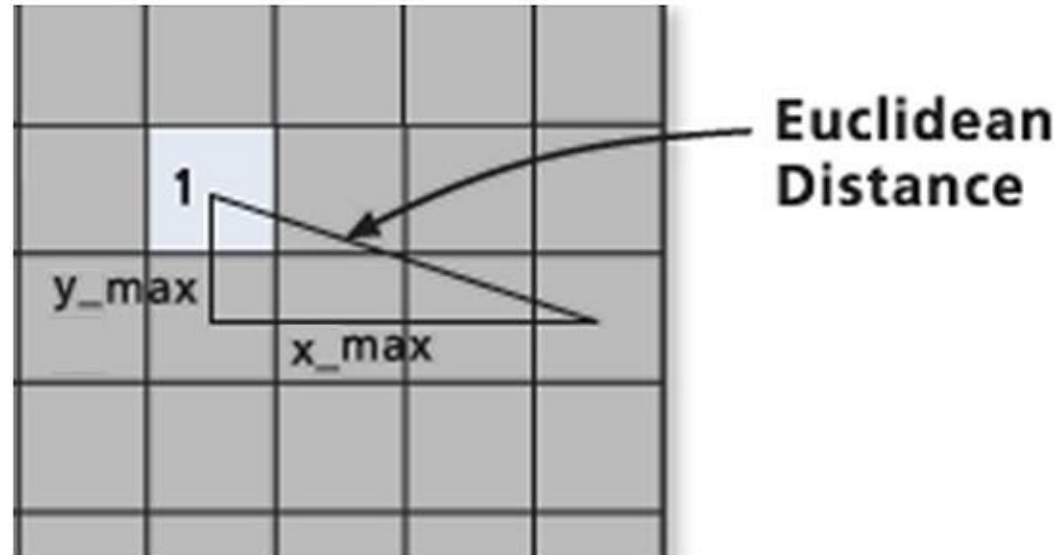
$Z=2$

La unidad en eje vertical
duplica a la unidad en
horizontal

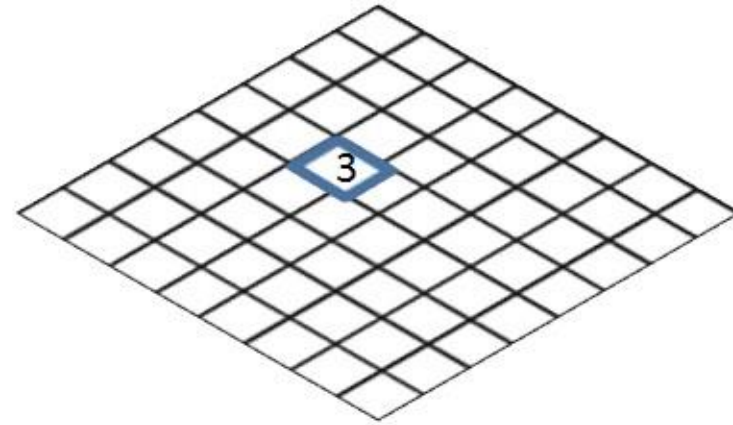
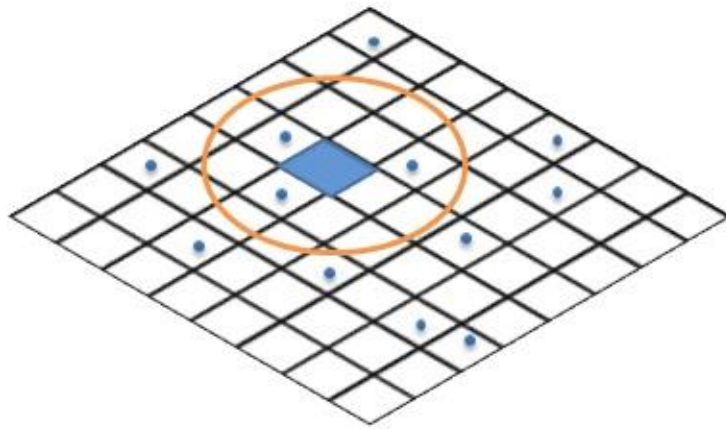
TOLERANCIA EN Z



ANÁLISIS DE DISTANCIAS



ANÁLISIS DE DENSIDAD



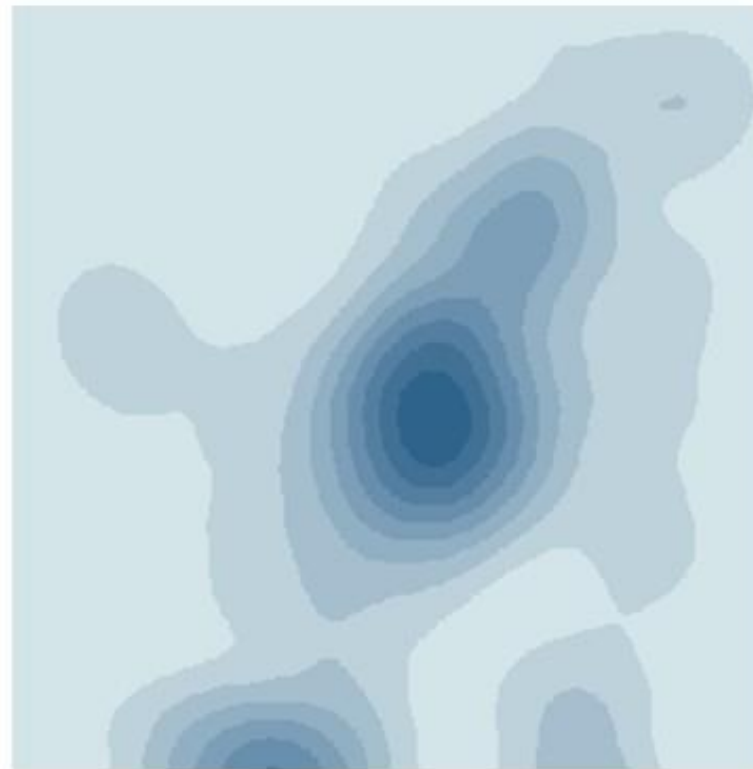
$$A = \pi r^2 \quad r = \sqrt{\frac{1}{\pi}}$$

$$r = 0,5641895 \text{ km}$$

ANÁLISIS DE DENSIDAD



Simple



Kernel

RECLASIFICACIÓN

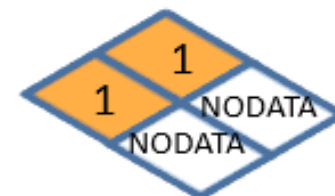
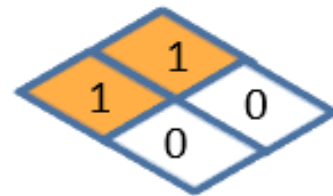
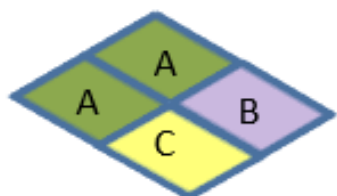
Revaloración de celdas raster de acuerdo a un criterio.

Ejemplo:

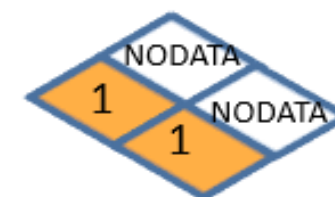
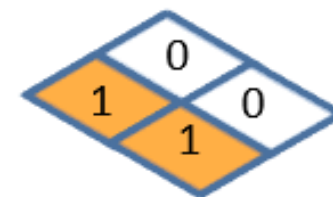
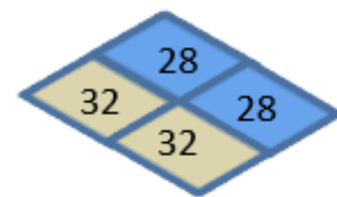
Valores óptimos = 1 , Otros valores = 0 u Otros Valores = NODATA (celdas anuladas)

Óptimos:

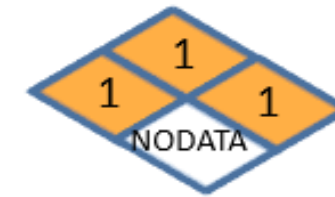
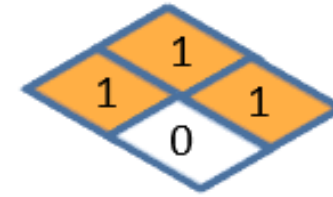
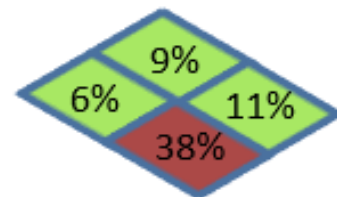
Capacidad de
Suelo: tipo A



Distancia a
drenajes:
 $\geq 30\text{m}$

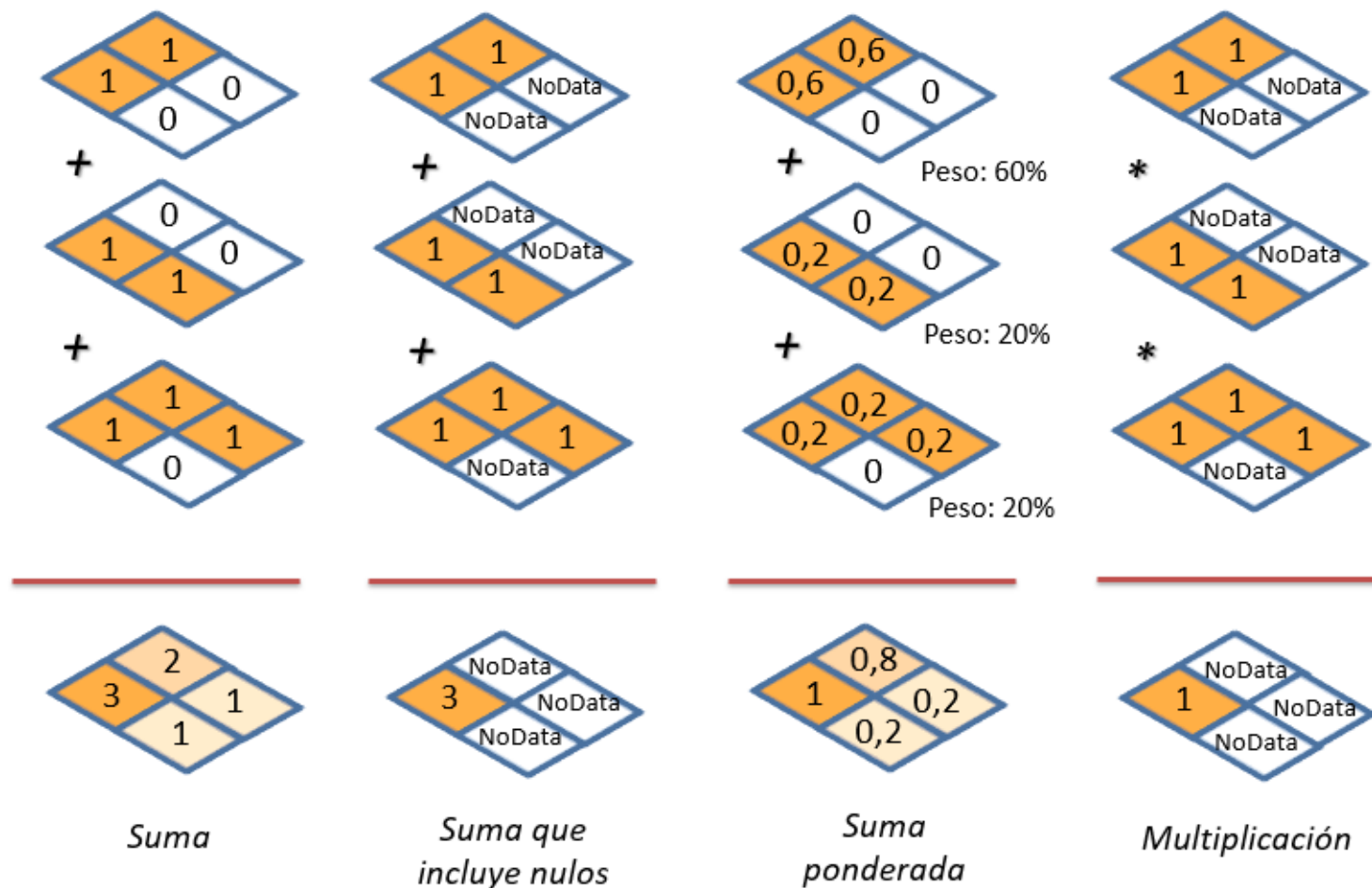


Pendiente:
 $< 12\%$

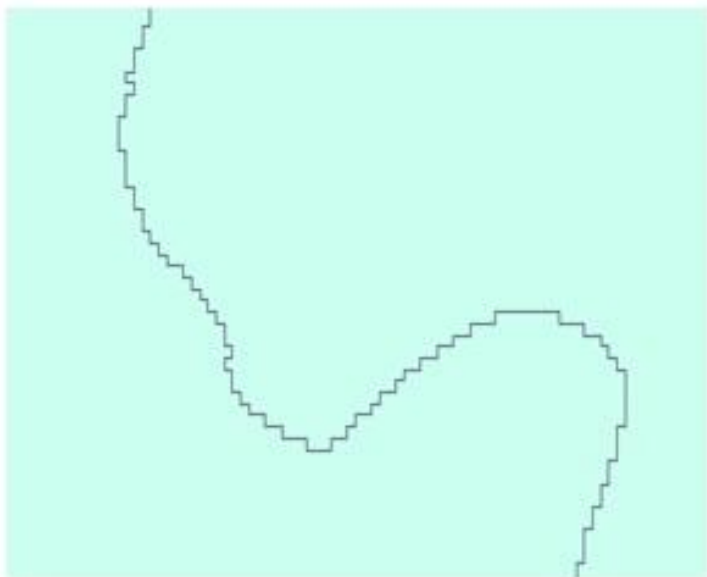


ÁLGEBRA DE MAPAS

Operación matemática entre celdas de capas ráster



SIMPLIFICAR



Sin simplificar



Simplificada