Resampling pixel values

Presented by Joey Roberts

Input raster will be a finer resolution

Output raster will be a coarser resolution
Nearest neighbor

Output image pixel value is calculated from the nearest pixel of the input image

Pixel values for output image resemble those of the input image

Recommended for use with discrete (categorical) data

Produces blocky results

Bilinear interpolation

distance weighted average of nearest four pixels

Smother appearance when compared to nearest neighbor resampling

Recommended for use with continuous data

Produces sharper results
Cubic convolution

distance weighted average of nearest sixteen pixels

Similar to bilinear interpolation except for more pixels from input image

Recommended for use with continuous data

Longer processing time

Produces sharpest results

References

ESRI’S ArcGIS 9.3 Desktop help

Questions

1) When resampling pixel values the input image has a finer resolution while the _______ image has a coarser resolution.

2) Which resampling method calculates pixel value from the nearest pixel of the input image?

3) Which resampling method calculates pixel value from the distance weighted average of nearest four pixels of the input image?

4) Which resampling method calculates pixel value from the distance weighted average of nearest sixteen pixels of the input image?