

Basic field calculations for new ArcGIS users

This document is a plain text version of Tabular: unofficial documentation on the ArcGIS Calculate Field tool for beginners with GIS, Python or both. Copy, paste and modify the expressions below in your Field Calculator.

Edit some text

Get some characters

Return the first character: !fieldname![0]

Return the first through third characters: !fieldname![0:3]

Return the second-to-last character: !fieldname![-2]

Remove some characters

Remove all whitespace: !fieldname!.rstrip()

Swap certain words: !fieldname!.replace("value", "New Value")

Remove all non-alphanumeric characters: ".join(ch for ch in !fieldname! if ch.isalnum())

Return NULL: "None"

Format the string

Capitalize the string: !fieldname!.capitalize()

Convert the string to lowercase: !fieldname!.lower()

Convert the string to all caps: !fieldname!.upper()

Do some math

Add and subtract

Add 5 to the field value: !fieldname! + 5

Subtract 6 from the field value: !fieldname! - 6

Multiply and divide

Multiply by 2: !fieldname! * 2

Divide by 3: !fieldname! / 3

Execute a standard Python function

Calculate the logarithm: math.log(!fieldname!)

Round to 2 decimal places: round(!fieldname!, 2)

Deal with geometries

Find feature extents

Find the most extreme longitude: !shape.extent.XMax!

Find the most extreme latitude: !shape.extent.YMax!

Calculate line lengths

Calculate feature length in map units: !shape.length!

Calculate feature length in feet: !shape.length@feet!

Calculate feature length in geodesic feet: !shape.length@Geodesicfeet!

Compute shape areas

Calculate feature area in map units: !shape.area!

Calculate feature area in square feet: !shape.area@squarefeet!

Calculate feature area in geodesic square feet: !shape.area@Geodesicsquarefeet!