

## Basic field calculations for new ArcGIS users

This document is a plain text version of Geomark: 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![0:2]

Return the last two characters: !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!.lowercase()

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

### 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: 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!