Update Feature Geometry

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If you have a line or polygon feature class or shapefile in which the feature geometry (i.e., length for the lines, and area and perimeter for the polygons) is missing or is incorrect (or you are not positive it is correct), follow the procedure below to update the feature geometry:

1. If not existent, add a field to the attribute table where you want to store the length, area or perimeter.
   - Open the attribute table.
   - Click on Options/Add Field.
   - Enter the name of the field (any short name is good).
   - Choose Double as Type.
   - Fill the Precision (field width) and Scale (number of decimal digits) slots.
   - Click OK.

2. Right click on the new field header and then click on Calculate Values… click Yes in the warning box and check the Advanced box.

3. In the Field Calculator, in the Pre-Logic VBA Script Code area type:
   - To calculate line lengths:
     ```vba
     Dim dblLength as double
     Dim pCurve as ICurve
     Set pCurve = [shape]
     dblLength = pCurve.Length
     and dblLength in the area below the name of the field.
     ```
   - To calculate polygon perimeters:
     ```vba
     Dim dblLength as double
     Dim pCurve as ICurve
     Set pCurve = [shape]
     dblLength = pCurve.Length
     and dblLength in the area below the name of the field.
     ```
   - To calculate polygon areas:
     ```vba
     Dim dblArea as double
     Dim pArea as IArea
     Set pArea = [shape]
     dblArea = pArea.Area
     and dblArea in the area below the name of the field.
     ```

4. Click OK and the field will be populated.

In which units are the lengths, perimeters and areas calculated?

a) Data frame map units.
b) Data frame display units
c) Feature class or shapefile units