Finding the Rotation Angle for each Polygon in a Feature Class

In the **ArcToolbox**, go to **Data Management Tools>Features>Minimum Bounding Geometry**. (See image below)
Input: <Polygon feature class in which you want to determine the rotation angle>
Output: Save as feature class in file geodatabase anywhere you like.
Geometry Type: RECTANGLE_BY_WIDTH
Group Option: NONE
Group Field(s) (Optional): Do not check anything on.
CHECK Add geometry characteristics as attributes to output which is below the Group Field list.

The output feature class will have an attribute called **MBG_Orientation**. This would be the rotation angle if you want all the maps in a series to be **Portrait**. If you need the Landscape rotation angle, **Add** a field called **Landscape** and make it type **Float**. Use the **Field Calculator** to find the landscape angle with **MBG_Orientation – 90**.

Join the output table with the new fields to the original layer and use the MBG_Orientation or Landscape field as the Rotation Field.