



3d Model a Dodecahedron in Fusion 360 - one method.

3d Model a Dodecahedron in Fusion 360 - one method. I have several - this one allows for adding designs to the faces.

some math info:

dihedral_angle 116.6

$\text{acos}(-1 / \text{sqrt}(5))$

base_size, number_units

starting_measure = base_size * number_units

inset_depth_signs = -1.25 mm

pentagram

tetrahedron

$\text{acos}(1/3 / \text{sqrt}(5))$

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1. Create New File
2. Create Parameters
3. Go to surface work Area
4. Create a Sketch
5. Make an edge polygon, with an any line length & 5 sides
 - 5a remove the dimension auto created
 - 5b. replace with a dim sketch and give it starting measure
6. Select the new sketch, and make a patch
7. Select the Patch, and choose Move / Copy
8. Click the copy checkbox
9. Select copy type as 'axis'
10. Select a Line from the pentagram to use as axis

11. Enter the angle of 116.6 (or use the formula)
12. The new copy of the pentagram is made
13. Create an axis line in the center of the pentagram
14. Select Angled Pentagon patch & create circular pattern
15. Choose the Axis line created in step 14 as the axis for this pattern
16. Choose the number of sides for this process (5).
17. Select all the faces, and now do a move copy at an axis point, 180 degrees
19. Select all the new faces, and do another rotation of 180 degrees on the axis build in #14
20. Select all the new faces, and do another move this one is point to point
21. select all the faces that make up the object and patch them together

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****MUSIC CREDITS****

[Moving On - Lakey Inspired](<https://soundcloud.com/lakeyinspired>)

****ABOUT MODSHAPES****