

A Picture of Cosmogram

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First step will be to find out the vertices and faces of the Dodecahedron

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PolyhedronData["Dodecahedron", "Faces"] // N;
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```
GraphicsComplex[{{-1.37638, 0., 0.262866}, {1.37638, 0., -0.262866},
  {-0.425325, -1.30902, 0.262866}, {-0.425325, 1.30902, 0.262866},
  {1.11352, -0.809017, 0.262866}, {1.11352, 0.809017, 0.262866},
  {-0.262866, -0.809017, 1.11352}, {-0.262866, 0.809017, 1.11352},
  {-0.688191, -0.5, -1.11352}, {-0.688191, 0.5, -1.11352},
  {0.688191, -0.5, 1.11352}, {0.688191, 0.5, 1.11352},
  {0.850651, 0., -1.11352}, {-1.11352, -0.809017, -0.262866},
  {-1.11352, 0.809017, -0.262866}, {-0.850651, 0., 1.11352},
  {0.262866, -0.809017, -1.11352}, {0.262866, 0.809017, -1.11352},
  {0.425325, -1.30902, -0.262866}, {0.425325, 1.30902, -0.262866}},
  Polygon[{{15, 10, 9, 14, 1}, {2, 6, 12, 11, 5}, {5, 11, 7, 3, 19}, {11, 12, 8, 16, 7},
    {12, 6, 20, 4, 8}, {6, 2, 13, 18, 20}, {2, 5, 19, 17, 13}, {4, 20, 18, 10, 15},
    {18, 13, 17, 9, 10}, {17, 19, 3, 14, 9}, {3, 7, 16, 1, 14}, {16, 8, 4, 15, 1}}]]
```

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(* Now,I will use the last output to locate a cube
  inside the dodecahedron with the right intersected verices)
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```
Graphics3D[{{Opacity[.005], FaceForm[Red], EdgeForm[Thick],
  EdgeForm[Red], PolyhedronData["Dodecahedron", "Faces"]},
  {Opacity[.2], FaceForm[Yellow], EdgeForm[Thick], EdgeForm[Yellow],
  GraphicsComplex[{dodeca[[2, 14]], dodeca[[2, 19]], dodek[[2, 13]],
  dodeca[[2, 10]], dodeca[[2, 16]], dodeca[[2, 11]], dodeca[[2, 6]],
  dodeca[[2, 4]]}, Polygon[{{1, 4, 3, 2}, {1, 2, 6, 5}, {2, 3, 7, 6},
  {4, 8, 7, 3}, {1, 5, 8, 4}, {5, 6, 7, 8}}]}], Lighting -> "Neutral"];
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