In[365]:=
```
SetDirectory[NotebookDirectory[]];

layers = 7; (*Number of nested layers of the pyramid*)
gradient = "SolarColors"; (*Color scheme used*)

output = {};
eqTriangle[length_, Δx_, Δy_, Δz_] :=
  Graphics3D[{Opacity[0], EdgeForm[Thick], Polygon[{{(-length / 2) + Δx, Δy, Δz},
      {Δx, (length * Sqrt[3] / 2) + Δy, Δz}, {(length / 2) + Δx, Δy, Δz}}]}];
radius[length_] := length / Sqrt[3];
pyramidUp[length_, Δx_, Δy_, Δz_, numLayers_] :=
  Graphics3D[{Opacity[(layers - numLayers) / 15],
    EdgeForm[{Thick}], ColorData[gradient][numLayers],
    Tetrahedron[{{(radius[length]) * Cos[7 π / 6] + Δx,
       (radius[length]) * Sin[7 π / 6] + Δy, (radius[length]) * Sin[7 π / 6] + Δz},
      {Δx, (radius[length]) + Δy, (radius[length]) * Sin[7 π / 6] + Δz},
      {(radius[length]) * Cos[11 π / 6] + Δx, (radius[length]) * Sin[11 π / 6] + Δy,
       (radius[length]) * Sin[7 π / 6] + Δz}, {Δx, Δy, (radius[length]) + Δz}}]}];
pyramidDown[length_, Δx_, Δy_, Δz_, numLayers_] := Graphics3D[
   {Opacity[(layers - numLayers) / 15], EdgeForm[{Thick}], ColorData[gradient][
     numLayers], Tetrahedron[{{(radius[length]) * Cos[7 π / 6] + Δx,
       (radius[length]) * Sin[7 π / 6] + Δy, -(radius[length]) * Sin[7 π / 6] + Δz},
      {Δx, (radius[length]) + Δy, -(radius[length]) * Sin[7 π / 6] + Δz},
      {(radius[length]) * Cos[11 π / 6] + Δx, (radius[length]) * Sin[11 π / 6] + Δy,
       -(radius[length]) * Sin[7 π / 6] + Δz}, {Δx, Δy, -(radius[length]) + Δz}}]}];
sierpPyramid[length_, Δx_, Δy_, Δz_, numLayers_] :=
  If[numLayers == layers, AppendTo[output, {pyramidUp[length, Δx, Δy, Δz]}];
   sierpPyramid[length / 2, Δx, Δy, Δz, numLayers - 1],
   AppendTo[output, {pyramidDown[length, Δx, Δy, Δz, numLayers]}]; If[numLayers == 0,
    "Base reached", sierpPyramid[length / 2, (radius[length]) * Cos[7 π / 6] + Δx,
     (radius[length]) * Sin[7 π / 6] + Δy, (radius[length]) * Sin[7 π / 6] + Δz,
     numLayers - 1]; sierpPyramid[length / 2, Δx, (radius[length]) + Δy,
     (radius[length]) * Sin[7 π / 6] + Δz, numLayers - 1]; sierpPyramid[length / 2,
     (radius[length]) * Cos[11 π / 6] + Δx, (radius[length]) * Sin[11 π / 6] + Δy,
     (radius[length]) * Sin[7 π / 6] + Δz, numLayers - 1];
    sierpPyramid[length / 2, Δx, Δy, (radius[length]) + Δz, numLayers - 1]]];

sierpPyramid[16, 0, 0, 0, layers];
Show[output]
Export["Sierpinski.Pyramid.pdf", EvaluationNotebook[]];
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Out[374]=