```
colorize[n_] := Module[{v, line, i, vertex, kn, tri,
    tri1, ver, good, halfplane, color, shuffle, kncolor, kplot, k},
   v = Table[{Cos[2 k Pi / n], Sin[2 k Pi / n]}, {k, 0, n - 1}] // N;
   vertex = Point[v];
   line = {};
   For[i = 1, i < n, i++,
    For[j = i + 1, j ≤ n, j++, AppendTo[line, Line[{v[[i]], v[[j]]}]]]];
kn = {vertex, line};
tri = Triangle[{{0, 0}, {1, 0}, {Cos[Pi/n]^2, Sin[Pi/n] * Cos[Pi/n]}}] // N;
tri1 = Triangle[{{0, 0}, {1, 0}, {Cos[2 Pi/n], Sin[2 Pi/n]}}] // N;
   ver = Point[{{0, 0}, {1, 0}, {Cos[Pi/n]^2, Sin[Pi/n] * Cos[Pi/n]}}] // N;
good = {};
   For[i = 1, i ≤ Length[line], i++, If[FindInstance[
       x ∈ tri && x ∈ line[[i]] && (! x ∈ ver), x] == {}, , AppendTo[good, line[[i]]]]];
halfplane =
    {};
   For[i = 1, i ≤ Length[good], i++, If[good[[i, 1, {1, 2}]] == {{1.0, 0}, {-1.0, 0}}, ,
     AppendTo[halfplane, HalfPlane[good[[i, 1]], -good[[i, 1, 1]]]]]];
color[x_, y_] := Sum[If[{x, y} ∈ halfplane[[i]] && {x, y} ∈ tri, 1, 0],
     {i, 1, Length[halfplane]}];
shuffle[x_, y_] := Module[{c}, c = color[x, y];
     If[Mod[c, 2] == 0, -c, c]];
   kncolor[x_, y_] := Module[{j, a, b, theta, m}, {a, b} = {x, y};
     For[j = 0, j < n, j++, If[{a, b} ∈ tri1, Break[], m = a;
       a = Cos[2 Pi/n] a - Sin[2 Pi/n] b;
       b = Sin[2 Pi/n] m + Cos[2 Pi/n] b;]];
     If[! ({a, b} ∈ tri), theta = ArcTan[b/a];
      m = a;
      a = Cos[2 Pi/n - 2 theta] a - Sin[2 Pi/n - 2 theta] b;
      b = Sin[2 Pi/n - 2 theta] m + Cos[2 Pi/n - 2 theta] b;];
     shuffle[a, b]];
   Print["begin! please wait...\ntime:"];
   Print[(AbsoluteTiming[kplot = ContourPlot[kncolor[x, y], {x, -1, 1}, {y, -1, 1},
         PlotLegends → Automatic, ColorFunction → "Rainbow"]])[[1]]];
   Print["colored Kn:"];
   Print[Show[{kplot, Graphics[kn]}]];
   Print["finished!"]];
```

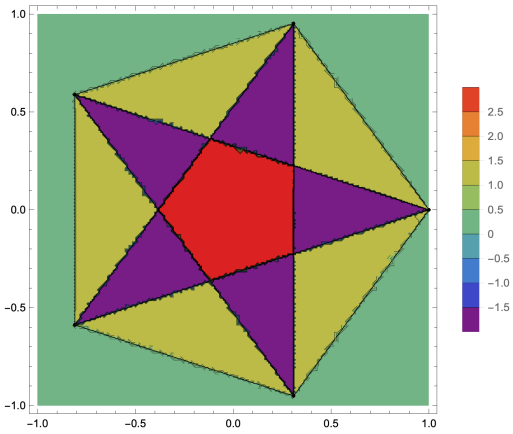
colorize[5]

begin! please wait...

time:

365.805

colored Kn:



finished!