

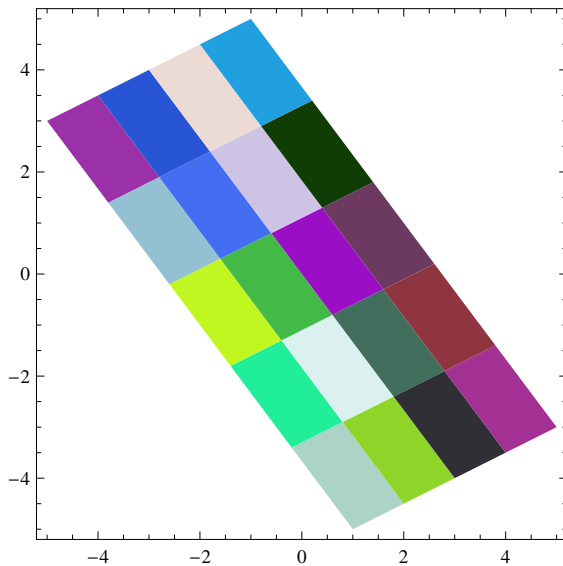
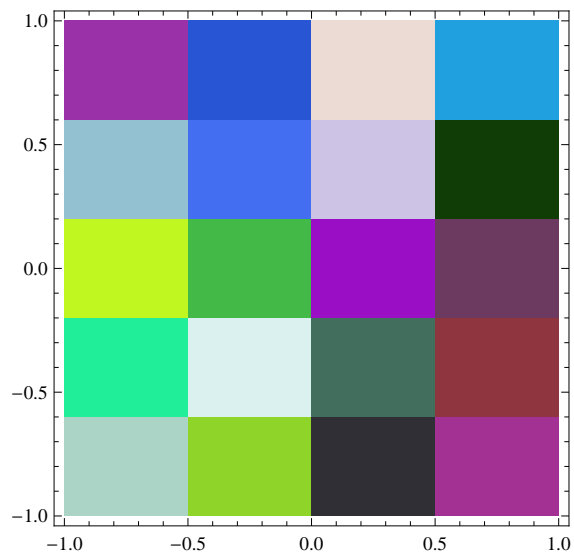
```

QuiltPlot[{f_, g_}, {x_, xmin_, xmax_, nx_}, {y_, ymin_, ymax_, ny_}] := Module[
  {dx, dy, grid, ix, iy},
  SeedRandom[1];
  dx = (xmax - xmin) / nx;
  dy = (ymax - ymin) / ny;
  grid = Table[
    {x → xmin + ix * dx, y → ymin + iy * dy},
    {ix, 0, nx}, {iy, 0, ny}
  ];
  grid = Map[{(f, g) /. #} &, grid, {2}];
  Show[
    Graphics[Table[
      {
        RGBColor[Random[], Random[], Random[]],
        Polygon[{
          grid[[ix, iy]],
          grid[[ix + 1, iy]],
          grid[[ix + 1, iy + 1]],
          grid[[ix, iy + 1]]
        }]
      },
      {ix, nx}, {iy, ny}
    ]],
    Frame → True, AspectRatio → 1
  ]
];

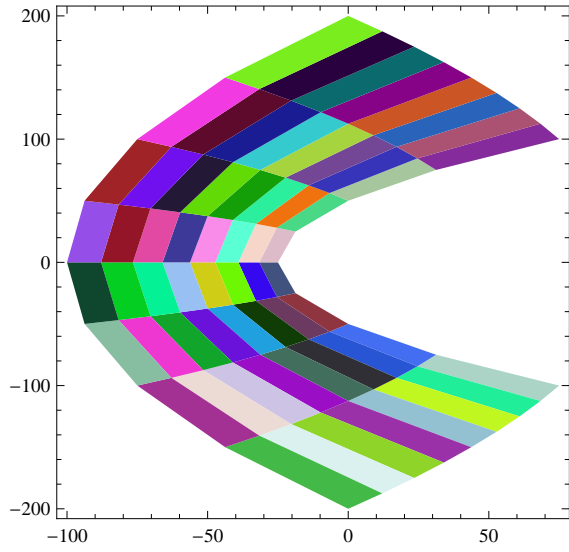
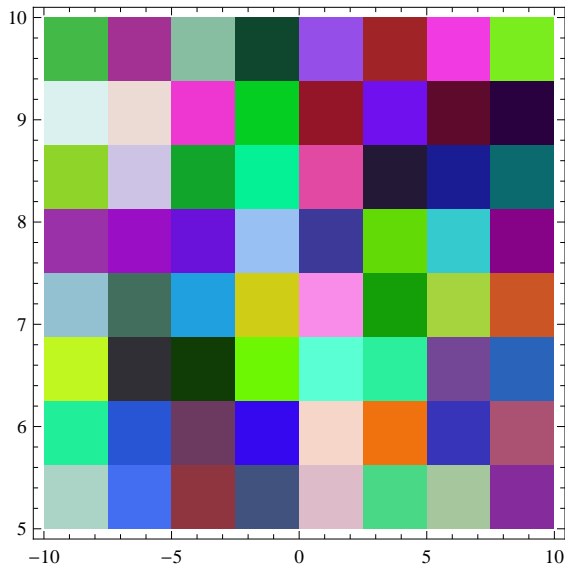
DoubleQuiltPlot[f_List, xrange_List, yrange_List] := GraphicsRow[{
  QuiltPlot[{x, y}, xrange, yrange],
  QuiltPlot[f, xrange, yrange]
}]

DoubleQuiltPlot[{2 x - 3 y, x + 4 y}, {x, -1, 1, 4}, {y, -1, 1, 5}]

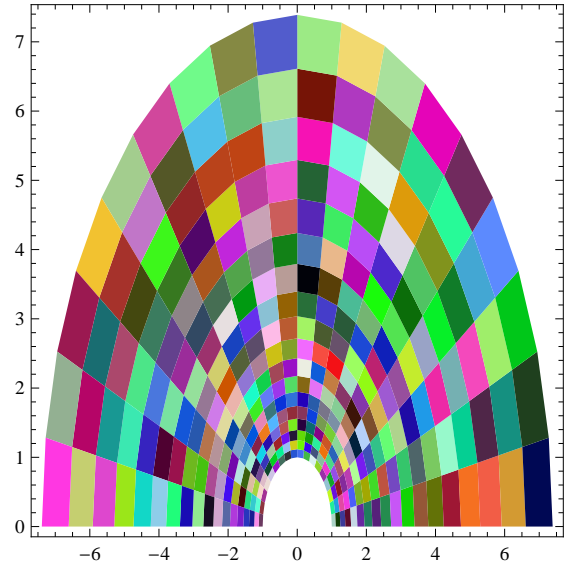
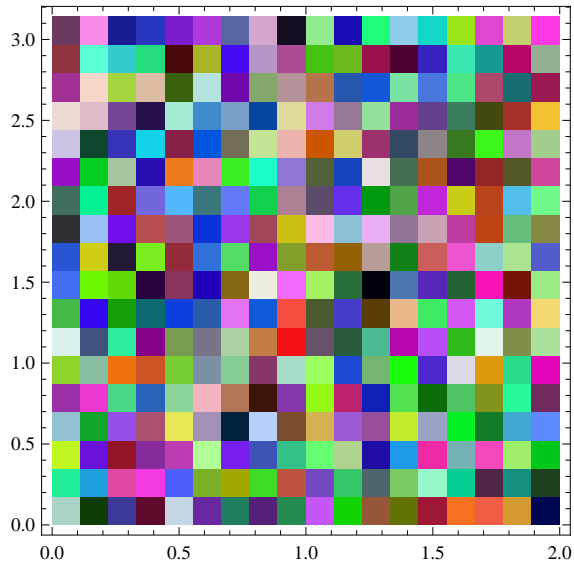
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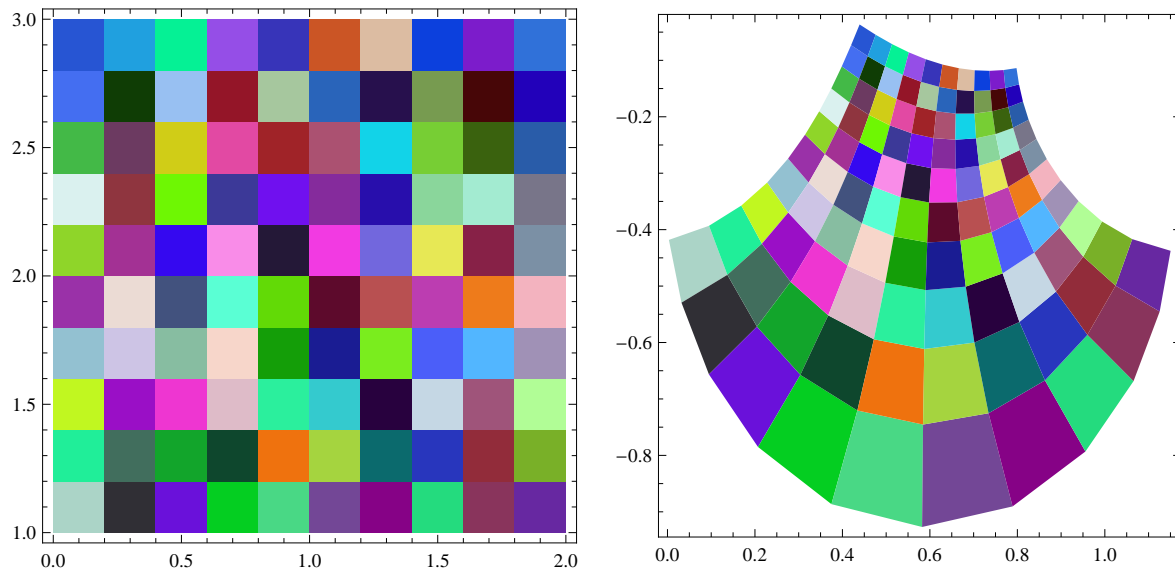
DoubleQuiltPlot [$\{x^2 - y^2, 2 * x * y\}$, {x, -10, 10, 8}, {y, 5, 10, 8}]



DoubleQuiltPlot [$\{E^x * \text{Cos}[y], E^x * \text{Sin}[y]\}$, {x, 0, 2, 18}, {y, 0, Pi, 18}]



```
DoubleQuiltPlot[{Re[Zeta[x + I y]], Im[Zeta[x + I y]]}, {x, 0, 2, 10}, {y, 1, 3, 10}]
```



=> We are studying the small scale theory of *everything*!