

Eli — PS 9 — 2025-02-21

In[147]:=

N[Sqrt[2], 500]

Out[147]=

```
1.41421356237309504880168872420969807856967187537694807317667973799073247846210703  
388503875343276415727350138462309122970249248360558507372126441214970999358314135  
222665927505592755799950501152782060571470109559971605970274534596862014728517413  
864088919860955232923048430871432145083976260362799525140798968725339654633180885  
296406206152583523950547457502877599617298355752203375318570113543746034084988475  
160386899970699004815030544027790316454247823068492936918621580578463111596668713  
30130156185689872372
```

In[148]:=

RandomReal[1, 10]

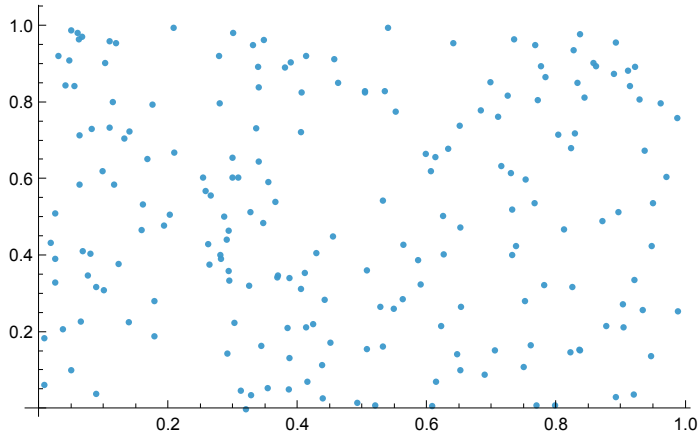
Out[148]=

```
{0.216962, 0.718348, 0.20062, 0.137805,  
0.652779, 0.251211, 0.294341, 0.666961, 0.503411, 0.430444}
```

In[149]:=

ListPlot[Transpose[{RandomReal[1, 200], RandomReal[1, 200]}]]

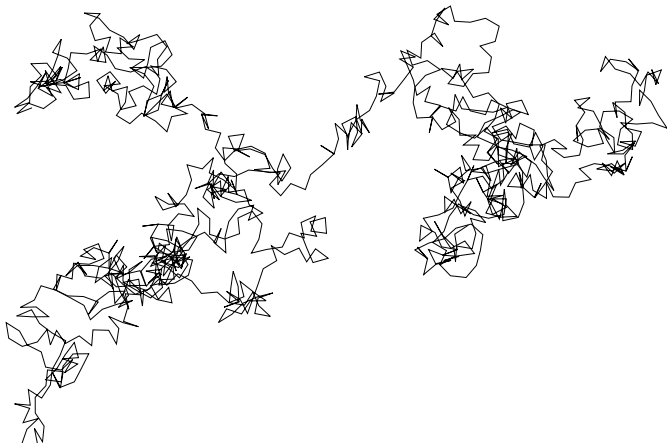
Out[149]=



In[150]:=

Graphics[Line[AnglePath[RandomReal[2 Pi, 1000]]]]

Out[150]=



In[151]:=

Table[Mod[n^2, 10], {n, 0, 30}]

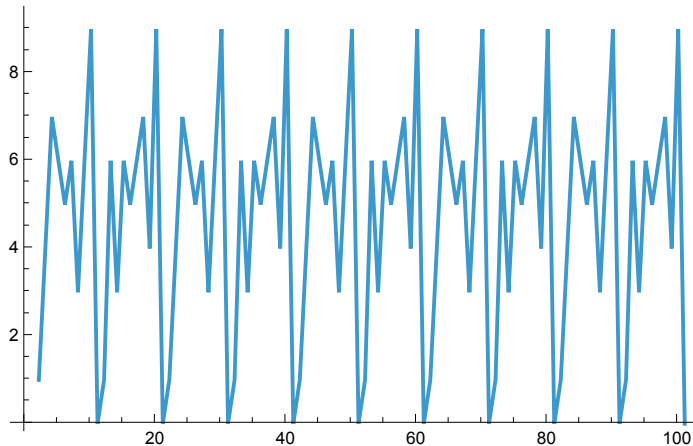
Out[151]=

{0, 1, 4, 9, 6, 5, 6, 9, 4, 1, 0, 1, 4, 9, 6, 5, 6, 9, 4, 1, 0, 1, 4, 9, 6, 5, 6, 9, 4, 1, 0}

In[152]:=

ListLinePlot[Table[Mod[n^n, 10], {n, 0, 100}]]Power: Indeterminate expression 0^0 encountered. ⓘ

Out[152]=



In[153]:=

Table[N[Pi^n, 1], {n, 10}]

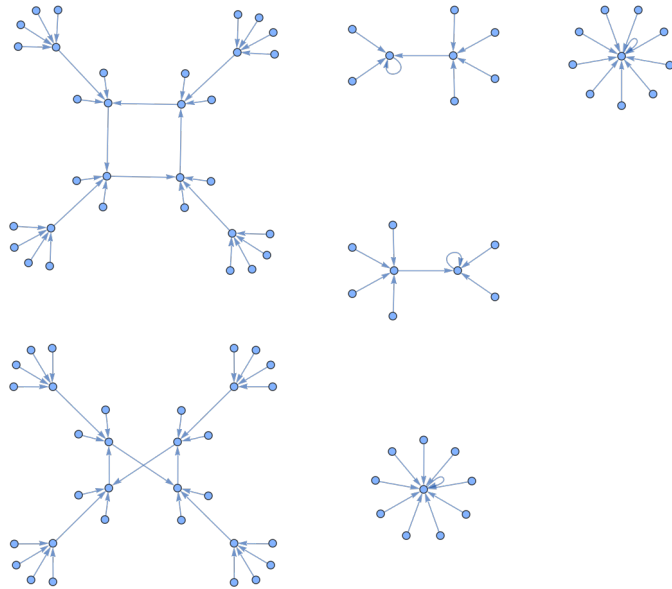
Out[153]=

{3., 1×10^1 , 3×10^1 , 1×10^2 , 3×10^2 , 1×10^3 , 3×10^3 , 9×10^3 , 3×10^4 , 9×10^4 }

In[154]:=

```
Graph[Table[n → Mod[n^2, 100] , {n, 0, 99}]]
```

Out[154]=

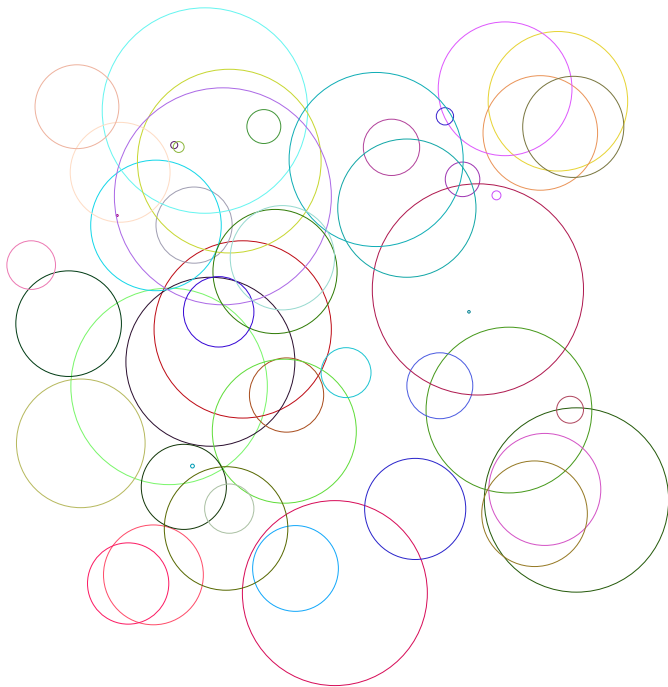


In[155]:=

```
Graphics[
```

```
Table[Style[Circle[{RandomReal[10, 2]}, RandomReal[2]], RandomColor[]], 50]]
```

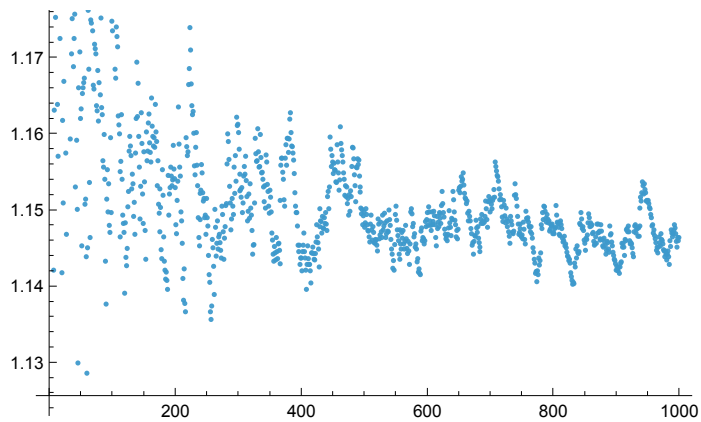
Out[155]=



In[156]:=

```
ListPlot[Table[Prime[n] / (n Log[n]), {n, 2, 1000}]]
```

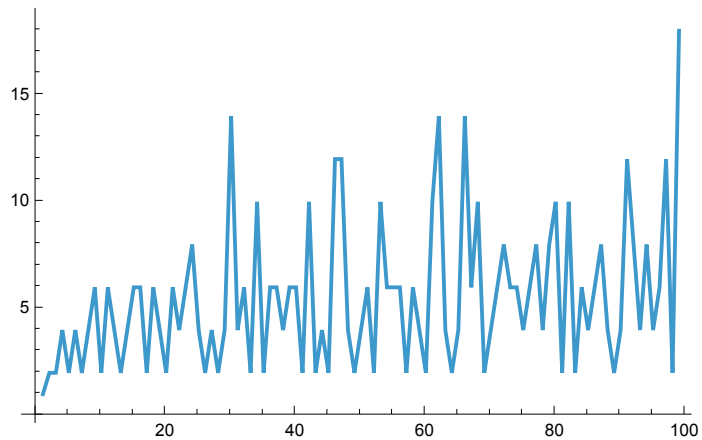
Out[156]=



In[157]:=

```
ListLinePlot[Table[Prime[n] - Prime[n - 1], {n, 2, 100}]]
```

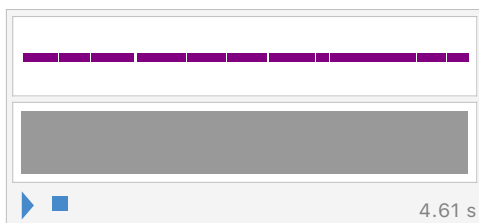
Out[157]=



In[158]:=

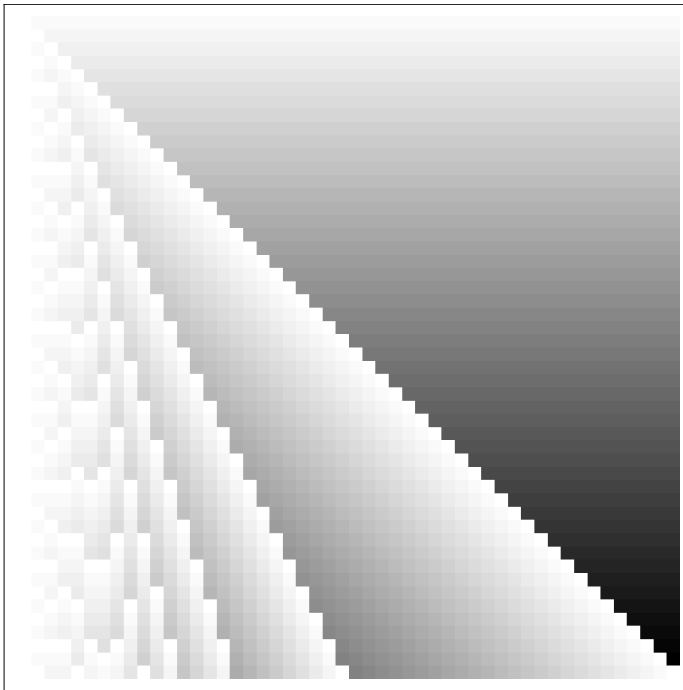
```
Sound[Table[SoundNote["C", RandomReal[0.5]], 20]]
```

Out[158]=



```
In[159]:= ArrayPlot[Table[Mod[i, j], {i, 50}, {j, 50}]]
```

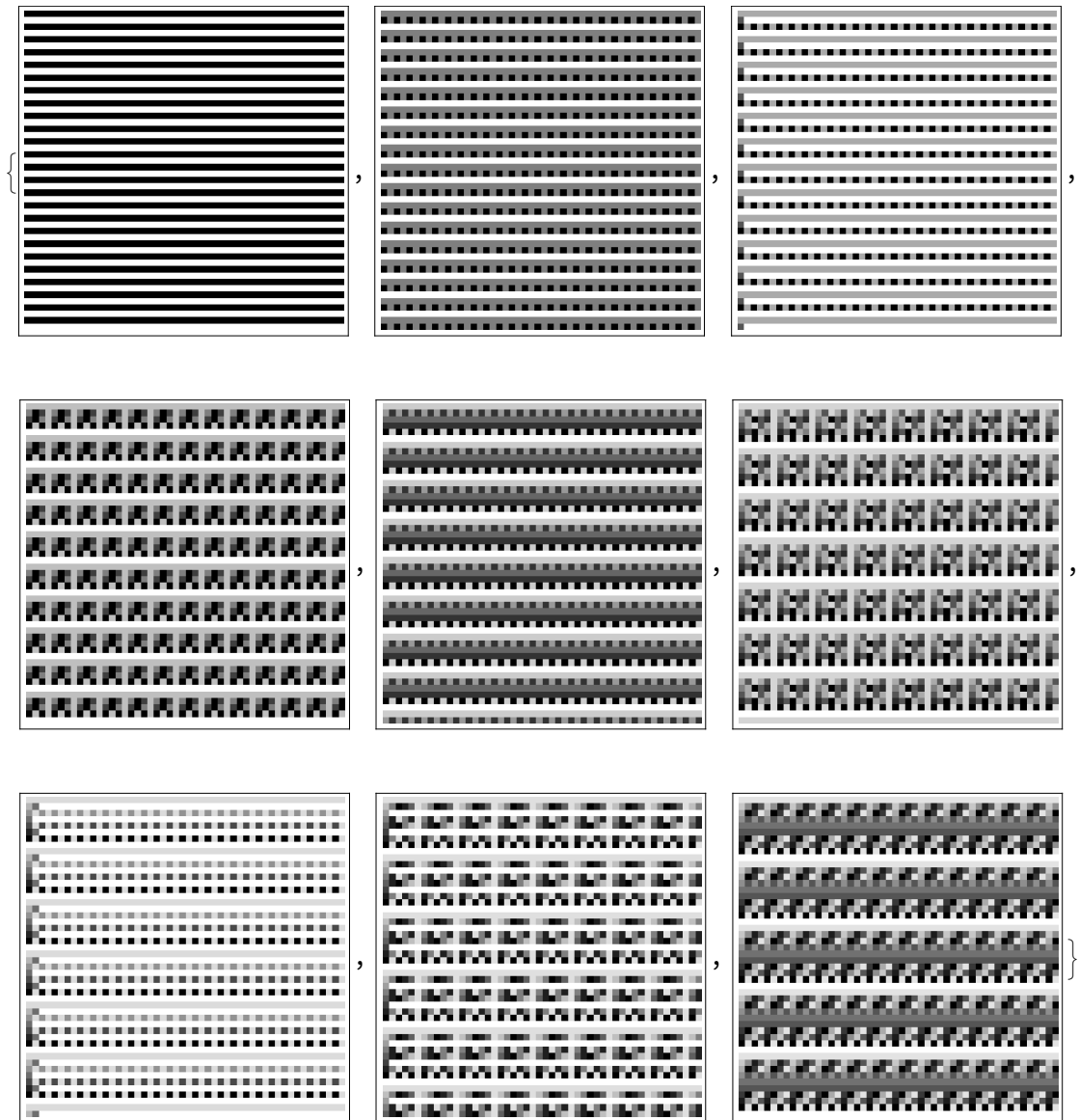
Out[159]=



In[160]:=

```
Table[ArrayPlot[Table[Mod[x^y, n], {x, 50}, {y, 50}]], {n, 2, 10}]
```

Out[160]=

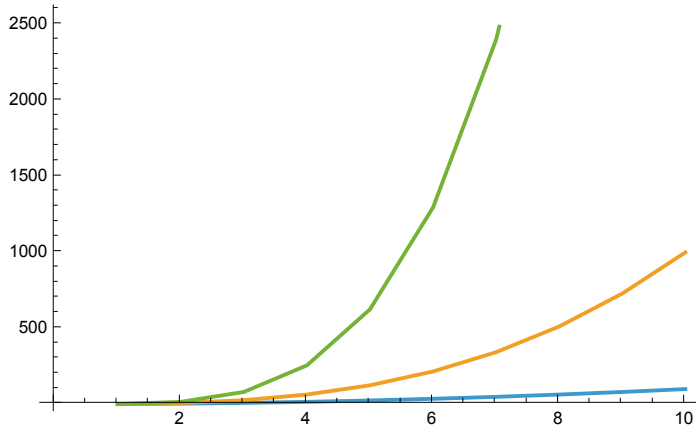


Chapter 24

In[161]:=

```
ListLinePlot[{Range[10]^2, Range[10]^3, Range[10]^4}]
```

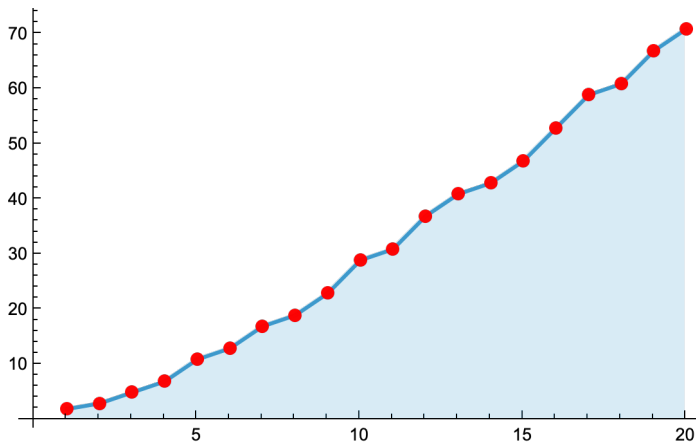
Out[161]=



In[162]:=

```
ListLinePlot[Table[Prime[n], {n, 20}], Mesh -> All, MeshStyle -> Red, Filling -> Axis]
```

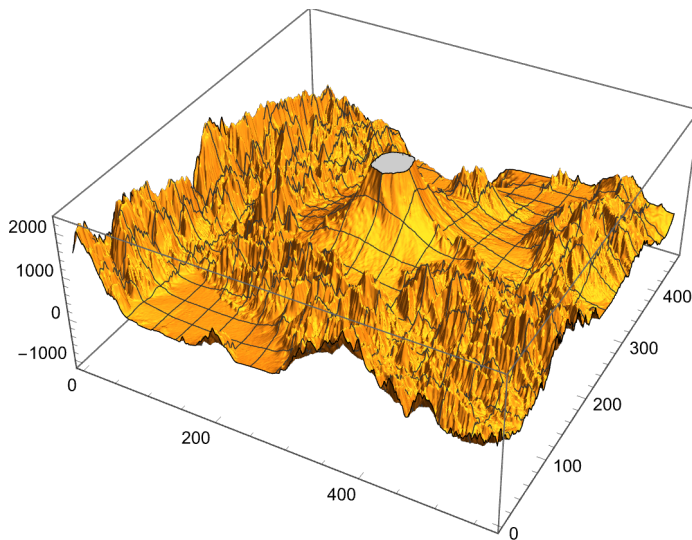
Out[162]=



In[163]:=

```
ListPlot3D[GeoElevationData[GeoDisk[Mount Fuji MOUNTAIN ☐, ☐ 20 mi ☐]]]
```

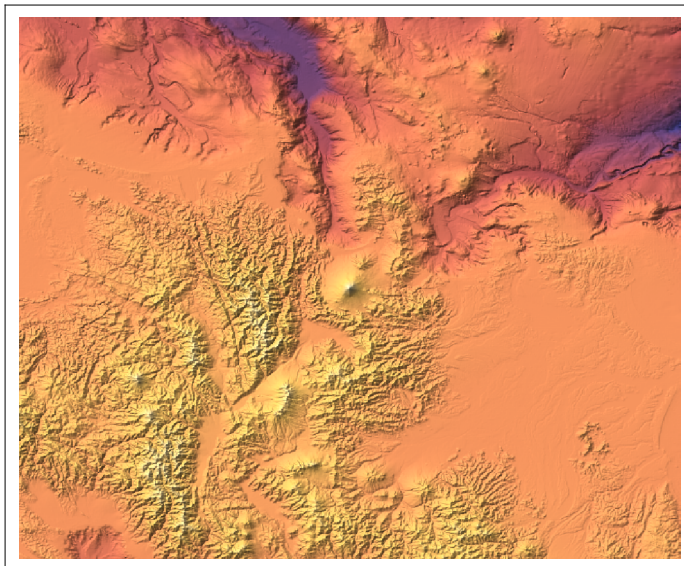
Out[163]=



In[164]:=

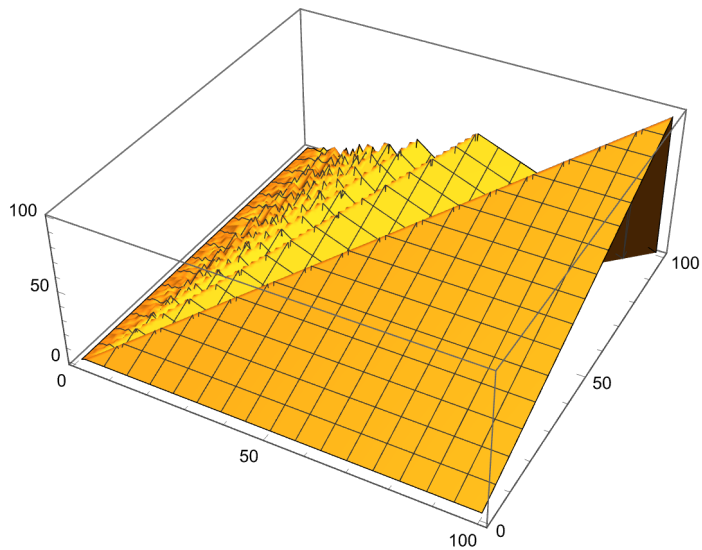
```
ReliefPlot[GeoElevationData[GeoDisk[Mount Fuji MOUNTAIN ☐, ☐ 100 mi ☐]]]
```

Out[164]=



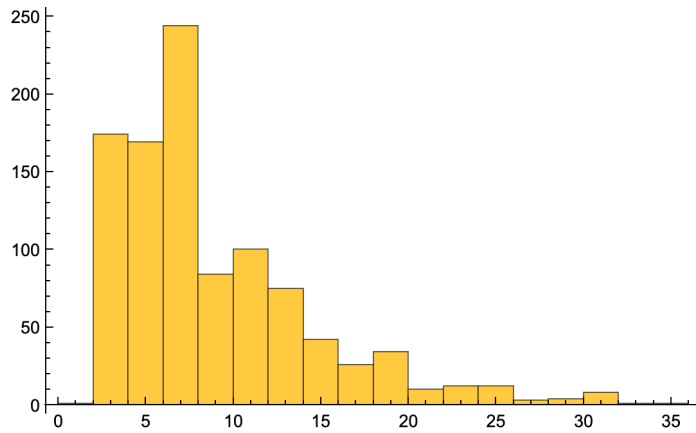

```
In[165]:= ListPlot3D[Table[Mod[i, j], {i, 100}, {j, 100}]]
```

Out[165]=



```
In[166]:= Histogram[Table[Prime[n + 1] - Prime[n], {n, 1000}]]
```

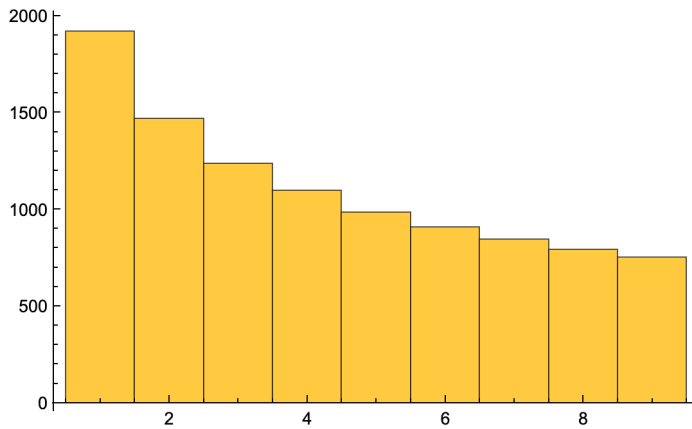
Out[166]=



In[167]:=

```
Histogram[Table[IntegerDigits[n^2][[1]], {n, 10 000}]]
```

Out[167]=



In[168]:=

```
Histogram[Table[Length[Characters[RomanNumeral[n]]], {n, 1000}]]
```

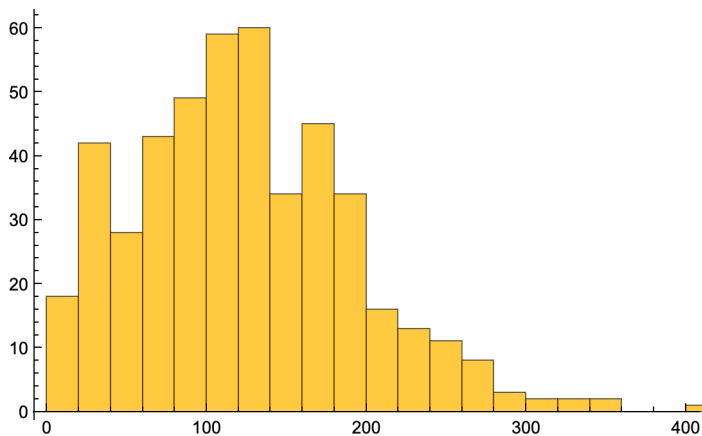
Out[168]=



In[169]:=

```
Histogram[StringLength[TextSentences[WikipediaData["computers"]]]]
```

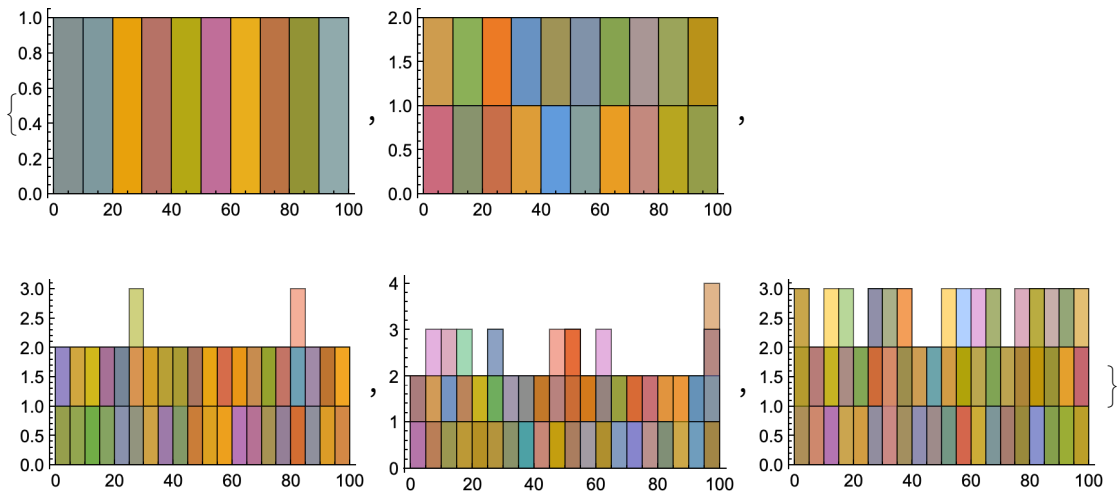
Out[169]=



In[170]:=

```
Table[Histogram[Table[Plus[RandomReal[100, n]], 1000]], {n, 1, 5}]
```

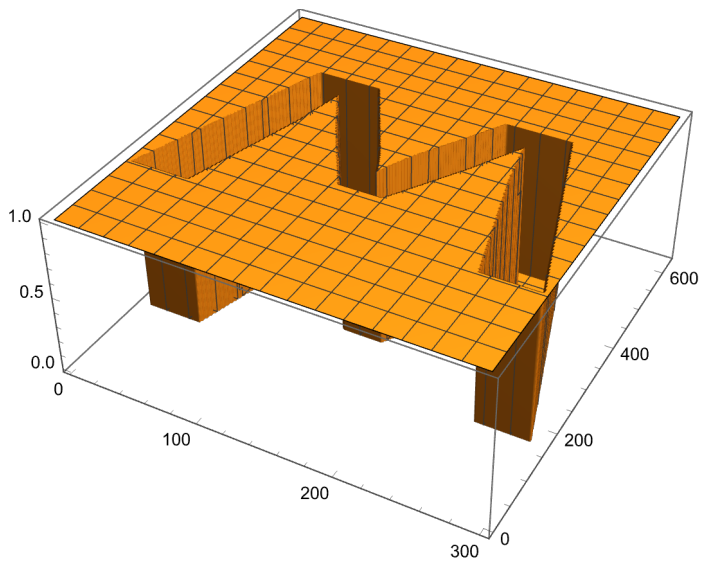
Out[170]=



In[171]:=

```
ListPlot3D[ImageData[Binarize[Rasterize[Style["W", 200]]]]]
```

Out[171]=



Chapter 25

In[172]:=

```
f /@ Range[5]
```

Out[172]=

```
{f[1], f[2], f[3], f[4], f[5]}
```

In[173]:=

f /@ g /@ Range[10]

Out[173]=

```
{f[g[1]], f[g[2]], f[g[3]], f[g[4]],
  f[g[5]], f[g[6]], f[g[7]], f[g[8]], f[g[9]], f[g[10]]}
```

In[174]:=

x // d // c // b // a

Out[174]=

a[b[c[d[x]]]]

In[175]:=

Framed /@ Alphabet[]

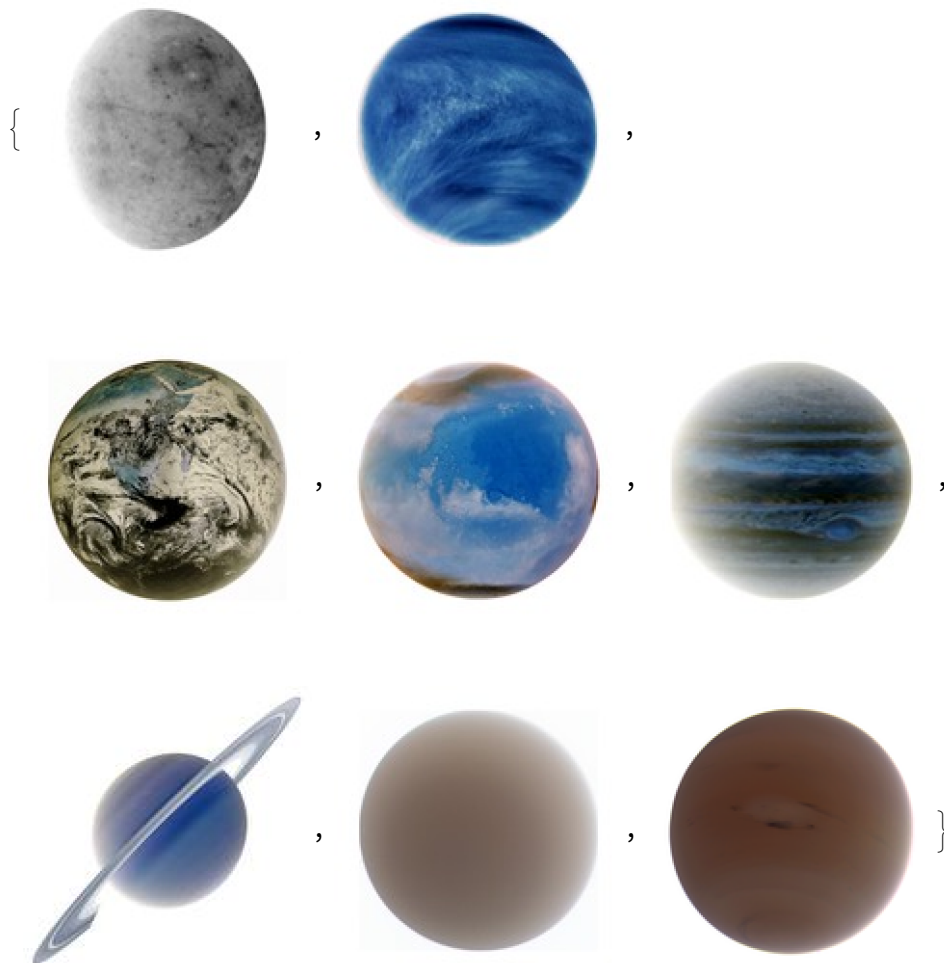
Out[175]=

```
{a, b, c, d, e, f, g, h, i, j, k, l,
  m, n, o, p, q, r, s, t, u, v, w, x, y, z}
```

In[176]:=

ColorNegate /@ EntityValue[ planets PLANETS  , "Image"]

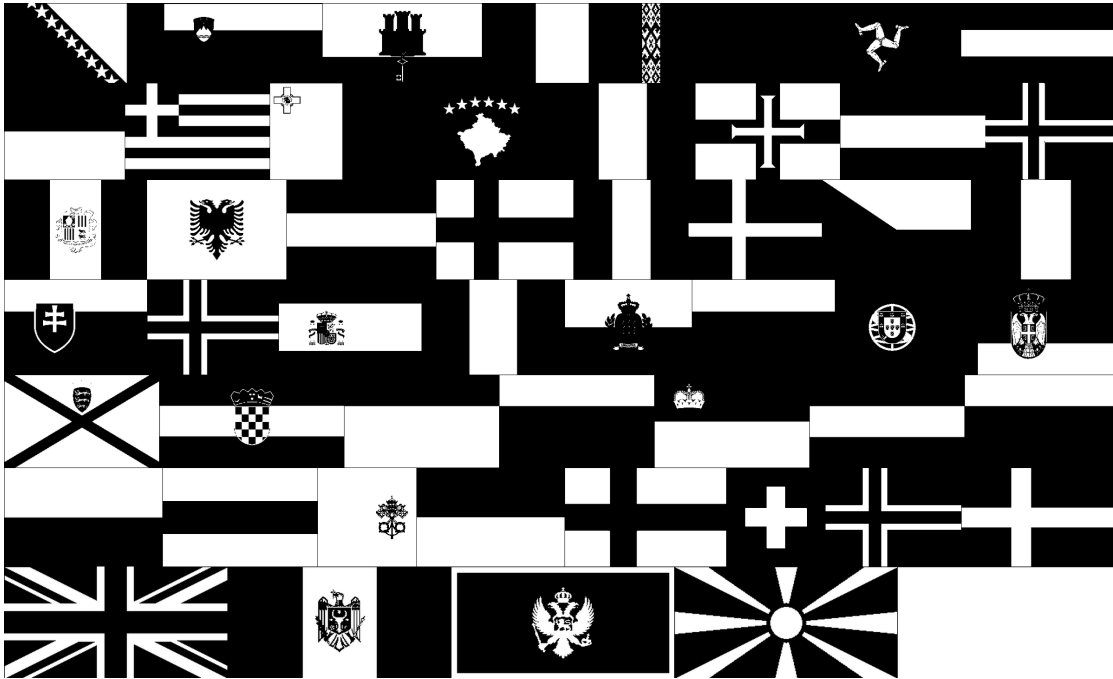
Out[176]=



In[177]:=

```
ImageCollage[Binarize /@ EntityValue[Europe GEOGRAPHIC REGION [countries], "Flag"]]
```

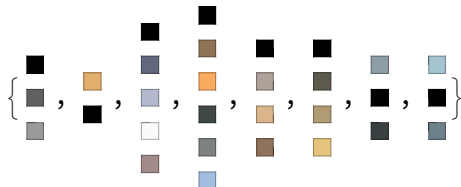
Out[177]=



In[178]:=

```
Column /@ DominantColors[EntityValue[planets PLANETS, "Image"]]
```

Out[178]=



In[179]:=

```
Plus@LetterNumber@Characters["Wolfram"]
```

Out[179]=

```
{23, 15, 12, 6, 18, 1, 13}
```