

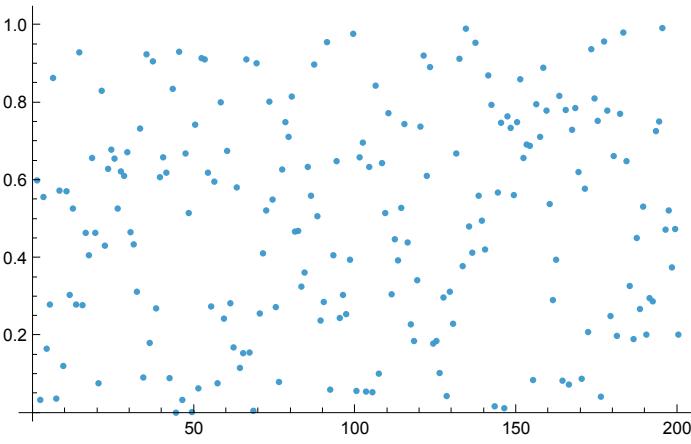
Tahm – PS 9 – 2025-02-21

Chapter 23

```
In[214]:= N[Sqrt[2], 500]
Out[214]= 1.4142135623730950488016887242096980785696718753769480731766797379907324784621070...
38850387534327641572735013846230912297024924836055850737212644121497099935831413...
22266592750559275579995050115278206057147010955997160597027453459686201472851741...
86408891986095523292304843087143214508397626036279952514079896872533965463318088...
29640620615258352395054745750287759961729835575220337531857011354374603408498847...
16038689997069900481503054402779031645424782306849293691862158057846311159666871...
30130156185689872372

In[215]:= Table[RandomReal[1], 10]
Out[215]= {0.829, 0.57681, 0.0481235, 0.466689, 0.482045,
0.266431, 0.660472, 0.569534, 0.927854, 0.733057}

In[216]:= ListPlot[Table[RandomReal[1], 200]]
Out[216]=
```



In[217]:= **Graphics[Line[AnglePath[RandomReal[2 π, 1000]]]]**

Out[217]=

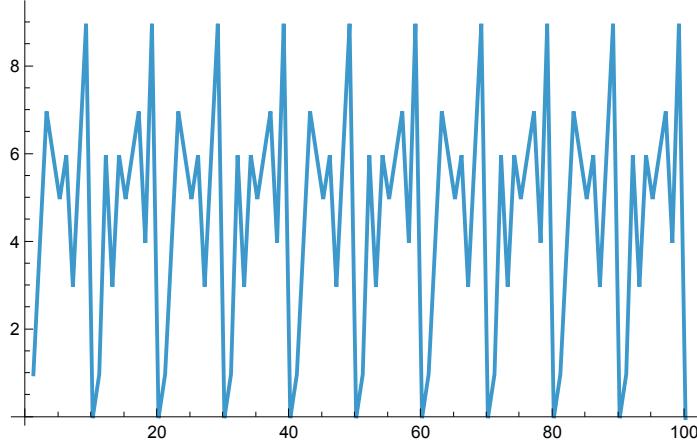


In[218]:= **Table[Mod[x^2, 10], {x, 0, 30}]**

Out[218]=
{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[219]:= **ListLinePlot[Table[Mod[x^x, 10], {x, 100}]]**

Out[219]=



In[220]:= **Round[Table[π^x, {x, 1, 10}], 10]**

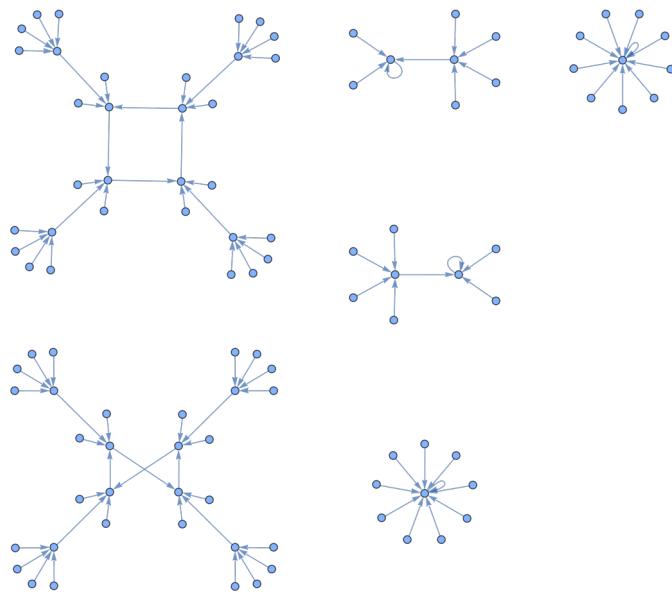
Out[220]=

{0, 10, 30, 100, 310, 960, 3020, 9490, 29810, 93650}

In[221]:=

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

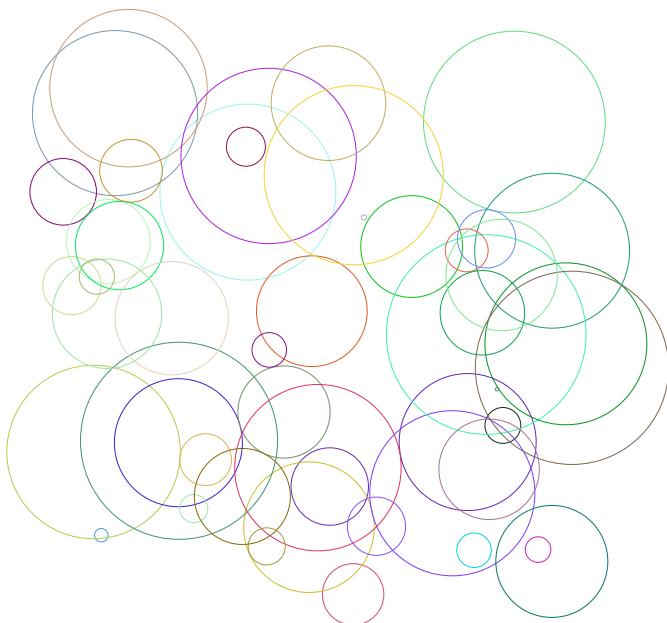
Out[221]=



In[222]:=

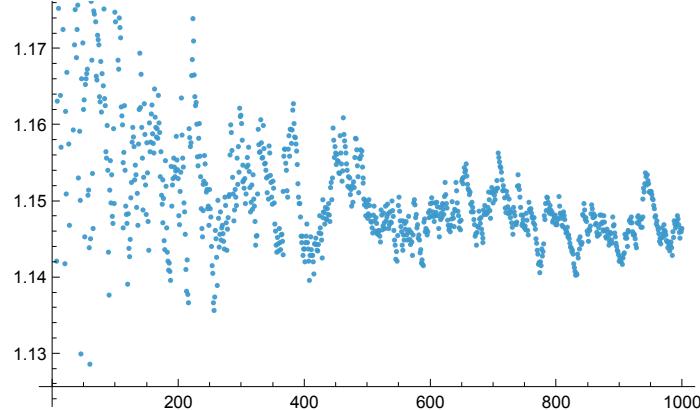
```
Graphics[Table[Style[Circle[RandomReal[10, 2], RandomReal[2]], RandomColor[], 50]]
```

Out[222]=



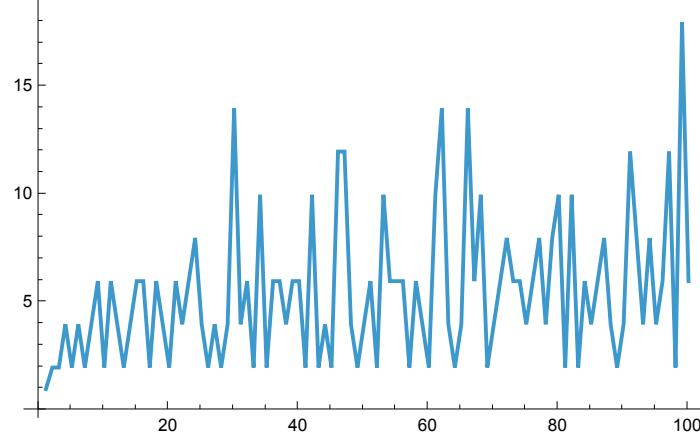
```
In[223]:= ListPlot[Table[Prime[x] / (x * Log[x]), {x, 2, 1000}]]
```

```
Out[223]=
```



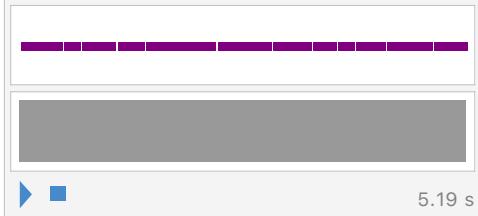
```
In[224]:= ListLinePlot[Table[Prime[x + 1] - Prime[x], {x, 1, 100}]]
```

```
Out[224]=
```



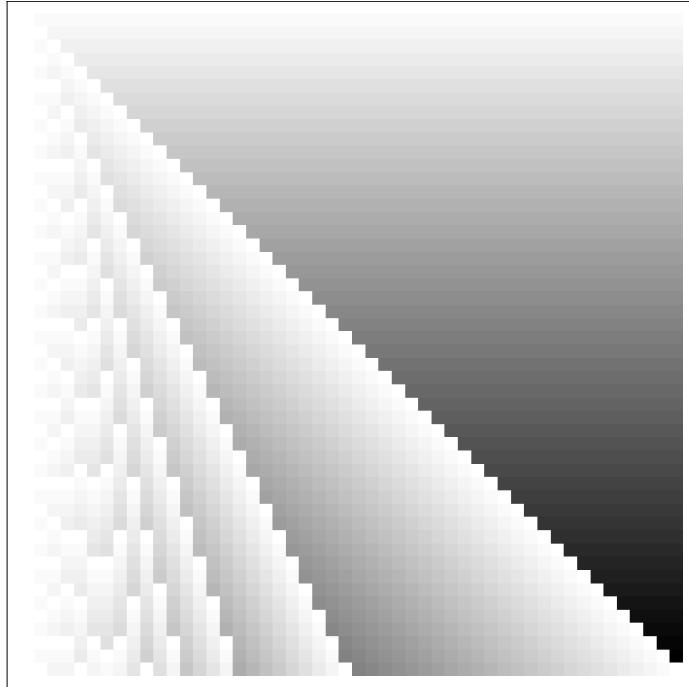
```
In[225]:= Sound[Table[SoundNote["C", RandomReal[0.5]], 20]]
```

```
Out[225]=
```



```
In[226]:= ArrayPlot[Table[Mod[i, j], {i, 50}, {j, 50}]]
```

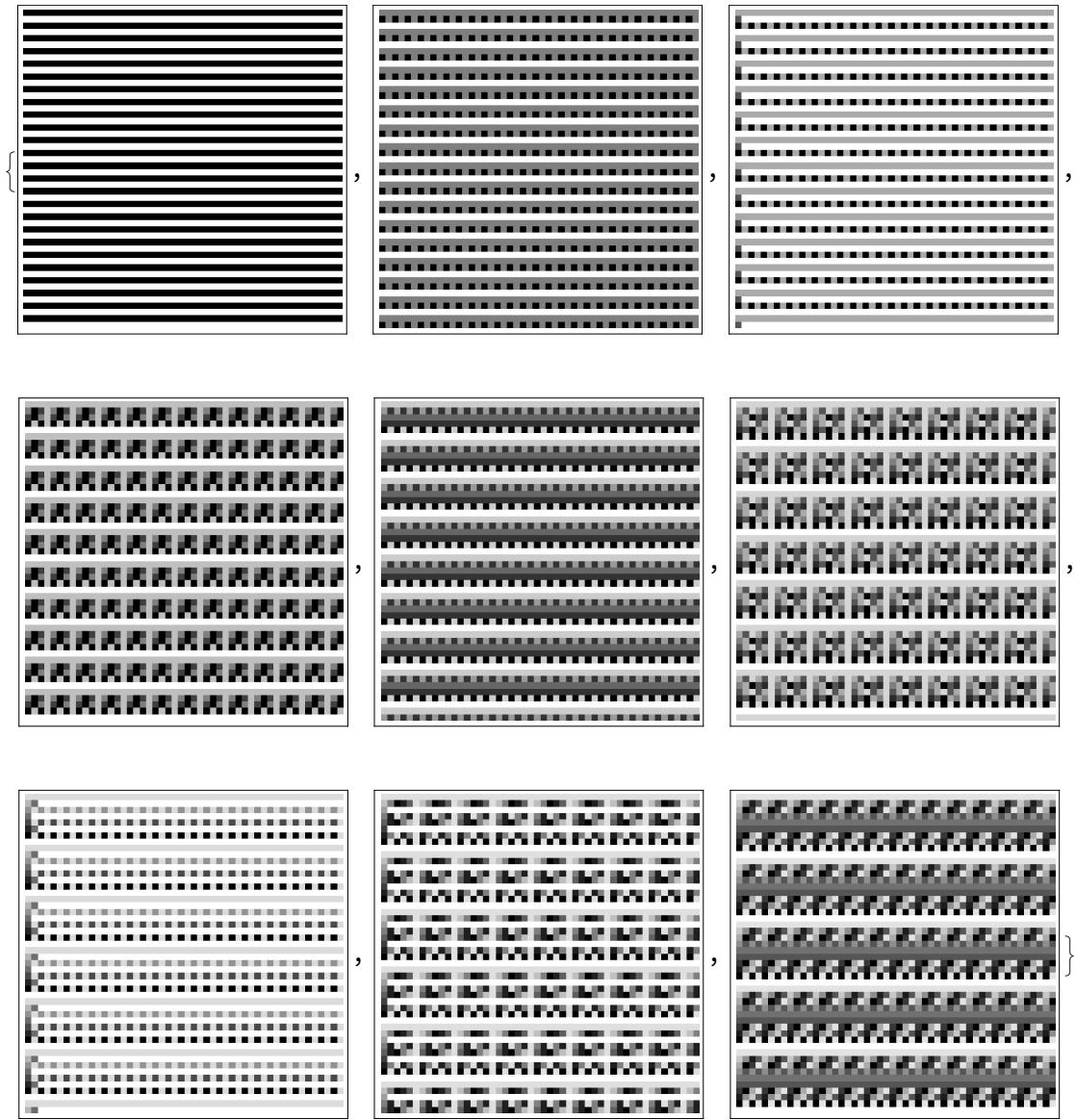
```
Out[226]=
```



In[227]:=

```
Table[ArrayPlot[Table[Mod[x^y, n], {x, 50}, {y, 50}]], {n, 2, 10, 1}]
```

Out[227]=

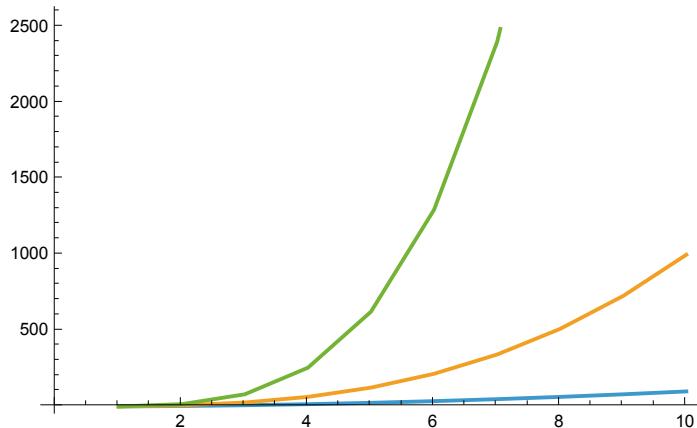


Chapter 24

In[228]:=

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

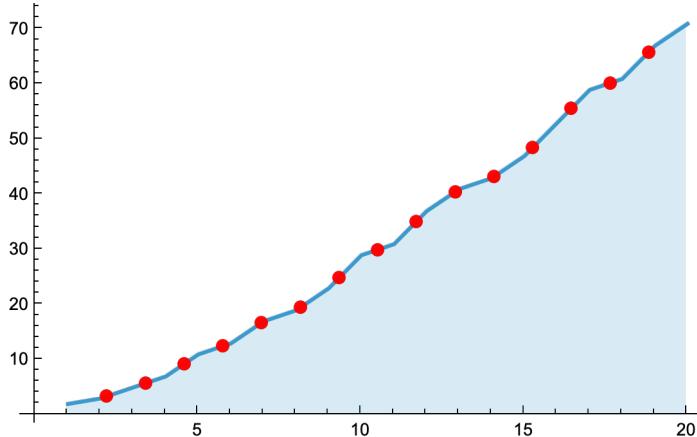
Out[228]=



In[229]:=

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

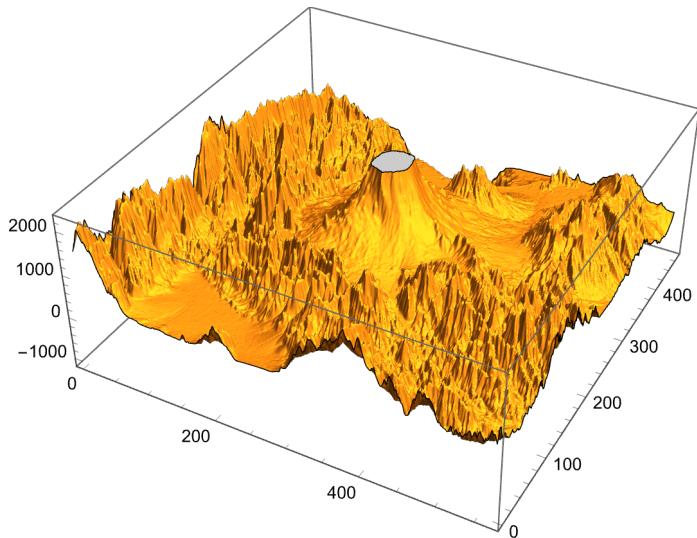
Out[229]=



In[230]:=

```
ListPlot3D[GeoElevationData[GeoDisk[Mount Fuji MOUNTAIN, 20 mi]], MeshStyle -> None]
```

Out[230]=

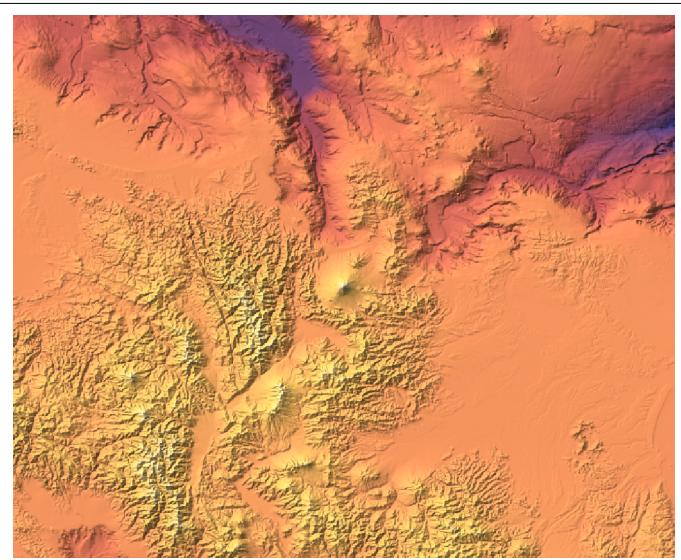


Looks a load better if you add
PlotRange->All.

In[231]:=

```
ReliefPlot[GeoElevationData[GeoDisk[Mount Fuji MOUNTAIN, 100 mi]], MeshStyle -> None]
```

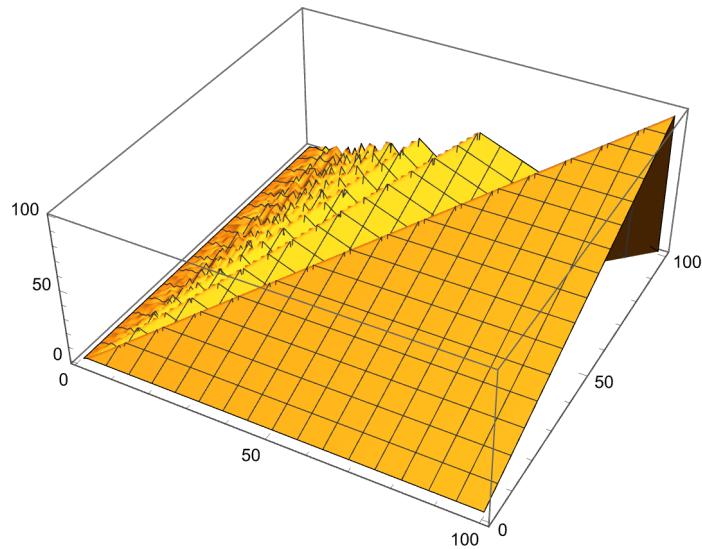
Out[231]=



In[232]:=

```
ListPlot3D[Table[Mod[i, j], {i, 100}, {j, 100}]]
```

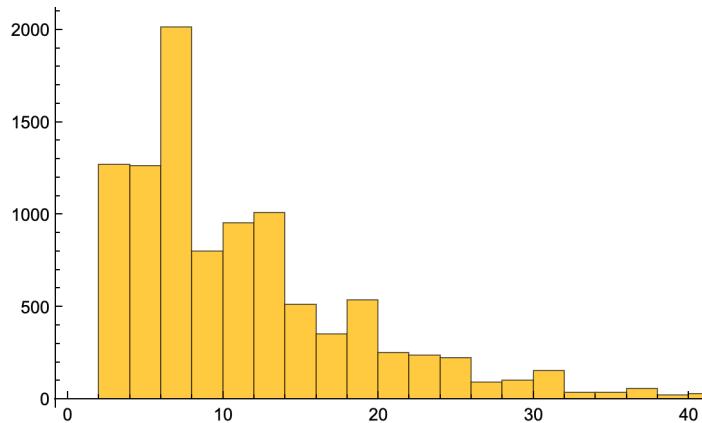
Out[232]=



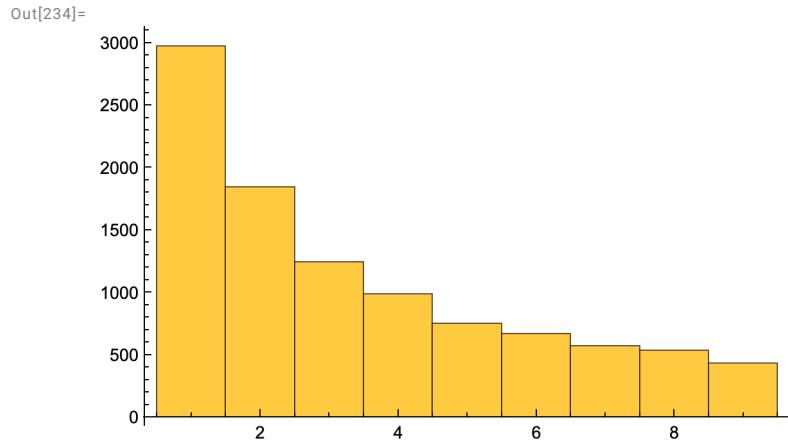
In[233]:=

```
Histogram[Table[Prime[x + 1] - Prime[x], {x, 10 000}]]
```

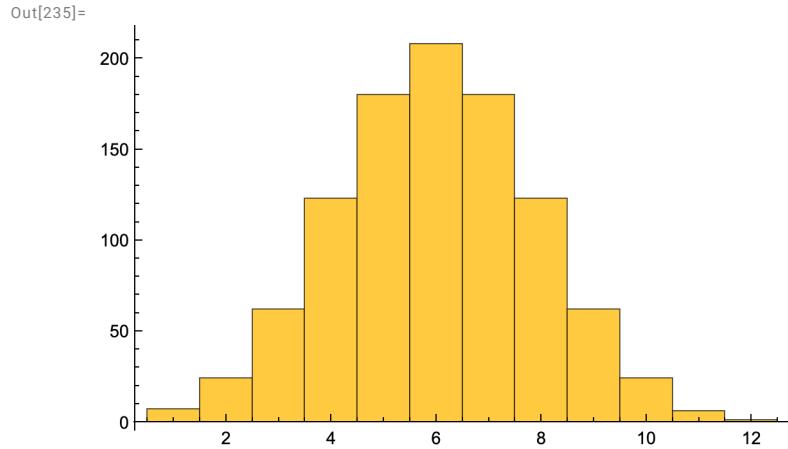
Out[233]=



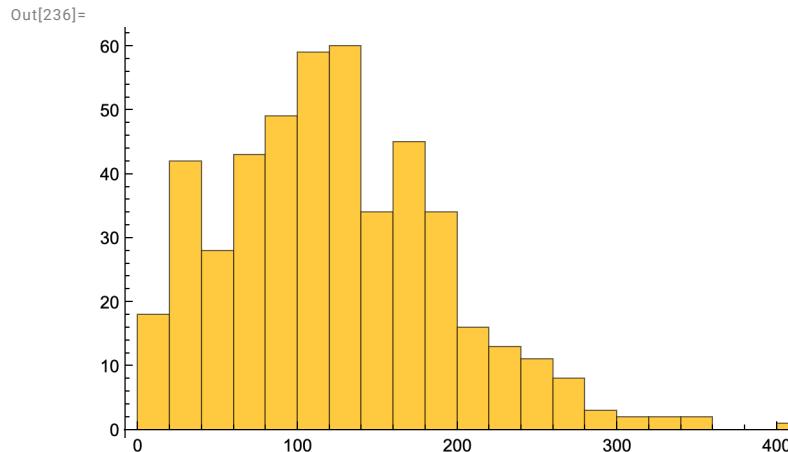
In[234]:= `Histogram[Table[First[IntegerDigits[x^x]], {x, 10 000}]]`



In[235]:= `Histogram[Table[StringLength[RomanNumeral[x]], {x, 1000}]]`



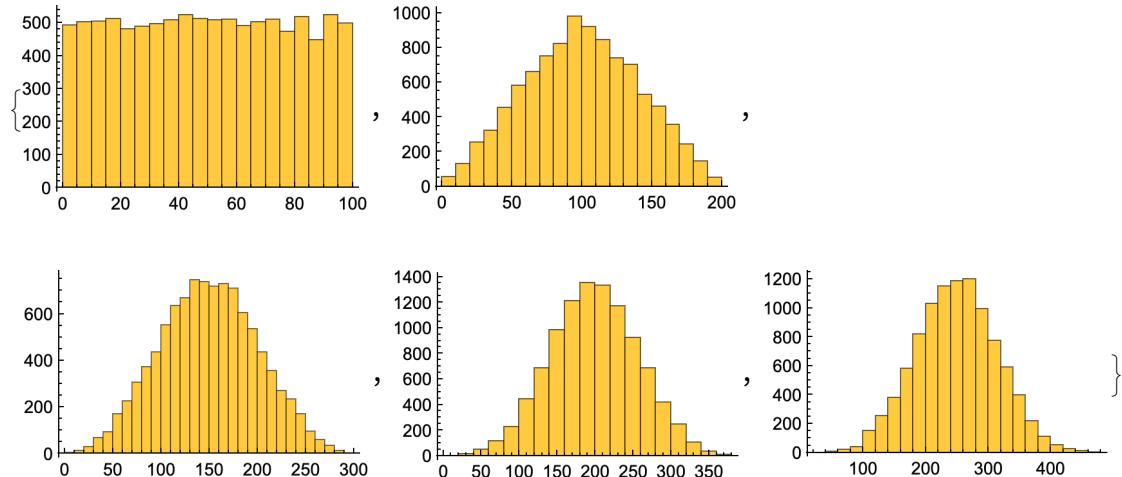
In[236]:= `Histogram[StringLength[TextSentences[WikipediaData["Computers"]]]]`



In[237]:=

```
Table[Histogram[Table[Total[RandomReal[100, n]], 10000]], {n, 5}]
```

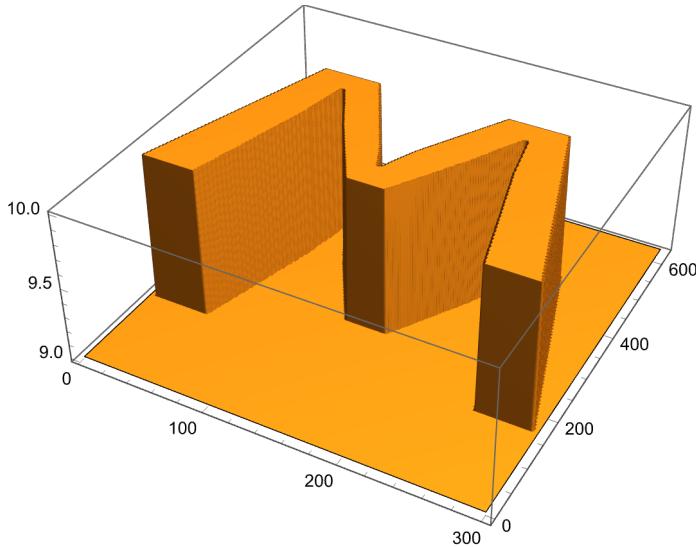
Out[237]=



In[238]:=

```
ListPlot3D[10 - ImageData[Binarize[Rasterize[Style["W", 200]]]], Mesh -> None]
```

Out[238]=



Chapter 25

In[239]:=

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

Out[239]=

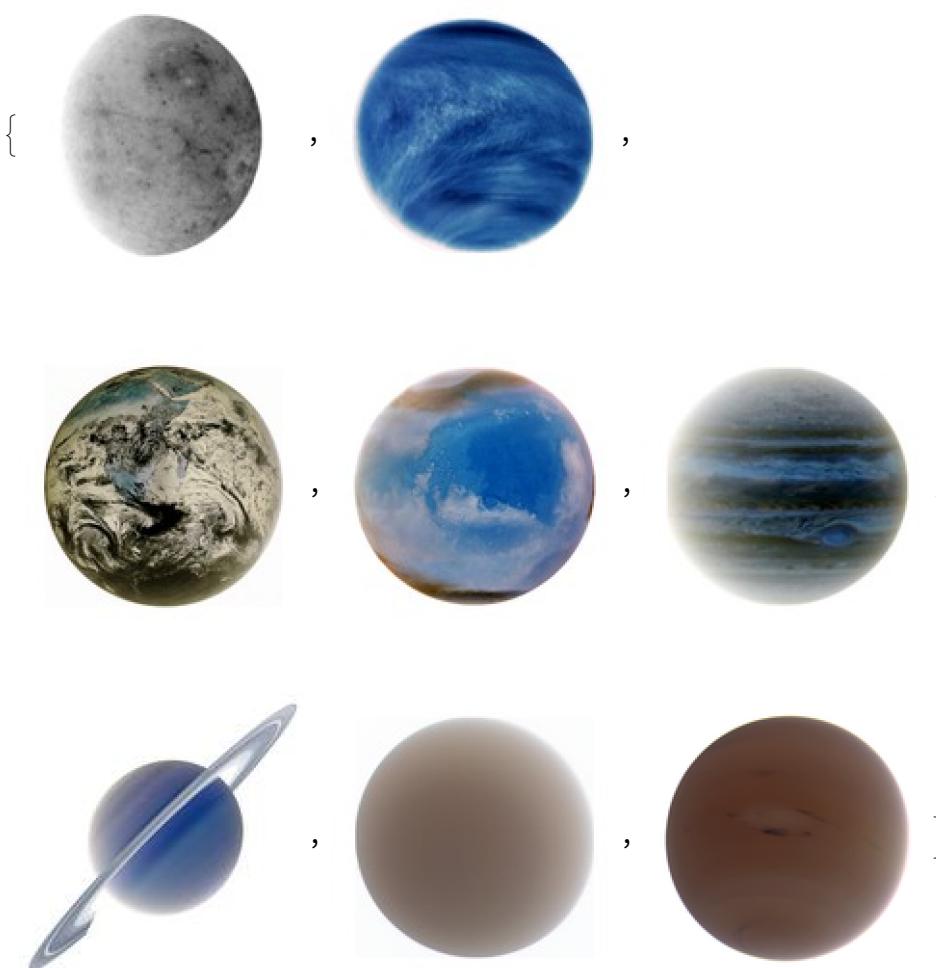
```
{f[1], f[2], f[3], f[4], f[5]}
```

```
In[240]:= f /@ g /@ Range[10]
Out[240]= {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[241]:= x // d // c // b // a
Out[241]= a[b[c[d[x]]]]

In[242]:= Framed /@ Alphabet[]
Out[242]= {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[243]:= ColorNegate /@ EntityValue[planets PLANETS, "Image"]
Out[243]=
```



In[244]:=

```
GeoGraphics /@ EntityList[ Group of 5 COUNTRIES ]
```

GeoServer: Unable to download one or more vector tiles.

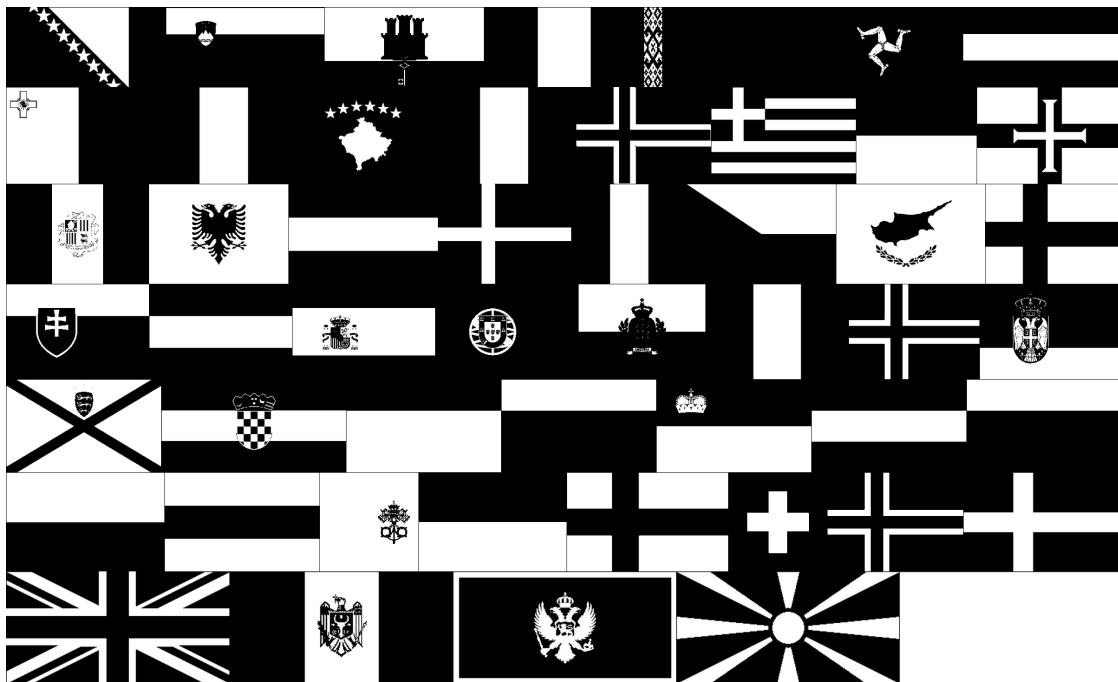
Out[244]=



In[245]:=

```
ImageCollage[Binarize /@ Europe COUNTRIES [ flag ]]
```

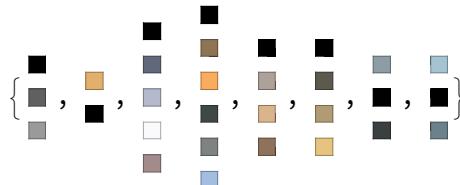
Out[245]=



In[246]:=

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

Out[246]=



In[247]:=

```
Total[LetterNumber /@ Characters["Wolfram"]]
```

Out[247]=

88

In[248]:=

In[249]:=

In[250]:=

In[251]:=

In[252]:=

In[253]:=