Jeremy — PS 15 — 2025-04-01

In[287]:=

```
Table[If[EvenQ[n], Style[n, Background → Yellow],
  Style[n, Background → LightGray]], {n, 100}]
```

Out[287]=

{1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22,
23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42,
43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62,
63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81,
82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100}

In[288]:=

```
Table[If[PrimeQ[n], Framed[n], n], {n, 100}]
```

Out[288]=

{1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22,
23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42,
43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61,
62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80,
81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100}

In[289]:=

```
Table[If[PrimeQ[n], Labeled[Framed[n], Style[Mod[n, 4], LightGray]], n], {n, 100}]
```

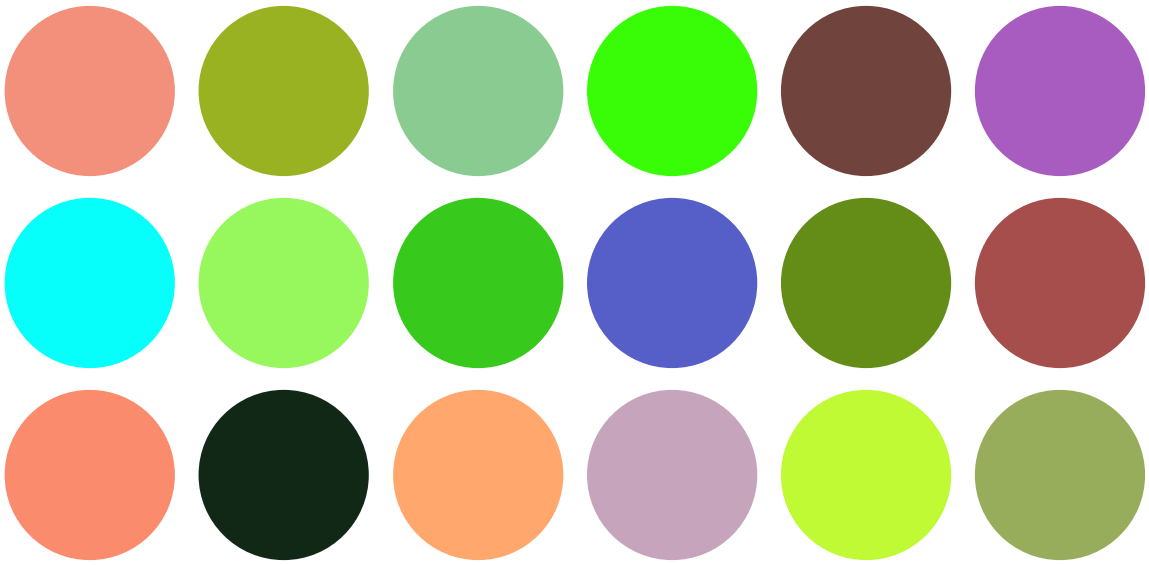
Out[289]=

{1, 2 (2), 3 (3), 4, 5 (1), 6, 7 (3), 8, 9, 10, 11 (3), 12, 13 (1), 14, 15, 16, 17 (1),
18, 19 (3), 20, 21, 22, 23 (3), 24, 25, 26, 27, 28, 29 (1), 30, 31 (3), 32, 33,
34, 35, 36, 37 (1), 38, 39, 40, 41 (1), 42, 43 (3), 44, 45, 46, 47 (3), 48, 49, 50,
51, 52, 53 (1), 54, 55, 56, 57, 58, 59 (3), 60, 61 (1), 62, 63, 64, 65, 66, 67 (3),
68, 69, 70, 71 (3), 72, 73 (1), 74, 75, 76, 77, 78, 79 (3), 80, 81, 82, 83 (3),
84, 85, 86, 87, 88, 89 (1), 90, 91, 92, 93, 94, 95, 96, 97 (1), 98, 99, 100}

In[290]:=

```
GraphicsGrid[Table[Graphics[{RandomColor[], Disk[]}], 3, 6]]
```

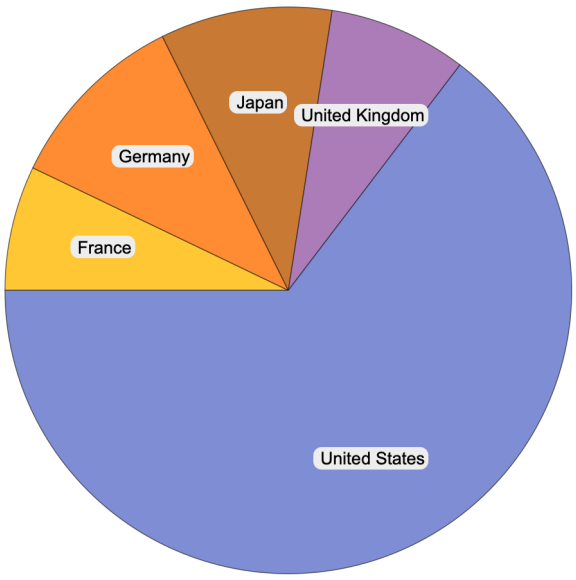
Out[290]=



In[291]:=

```
PieChart[Labeled[#["GDP"], #] & /@ EntityList[ Group of 5 COUNTRIES ]]
```

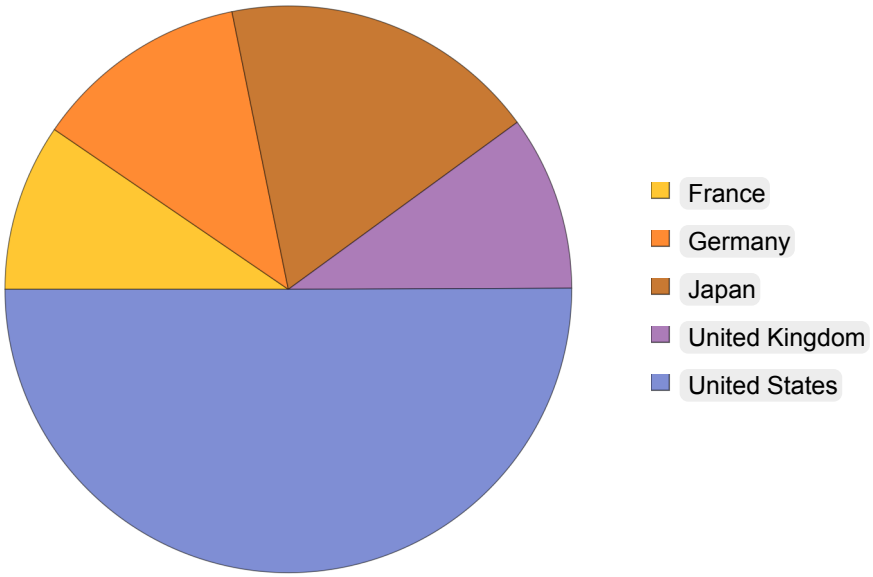
Out[291]=



In[292]:=

```
PieChart[Legended[#["Population"], #] & /@ EntityList[ Group of 5 COUNTRIES ]]
```

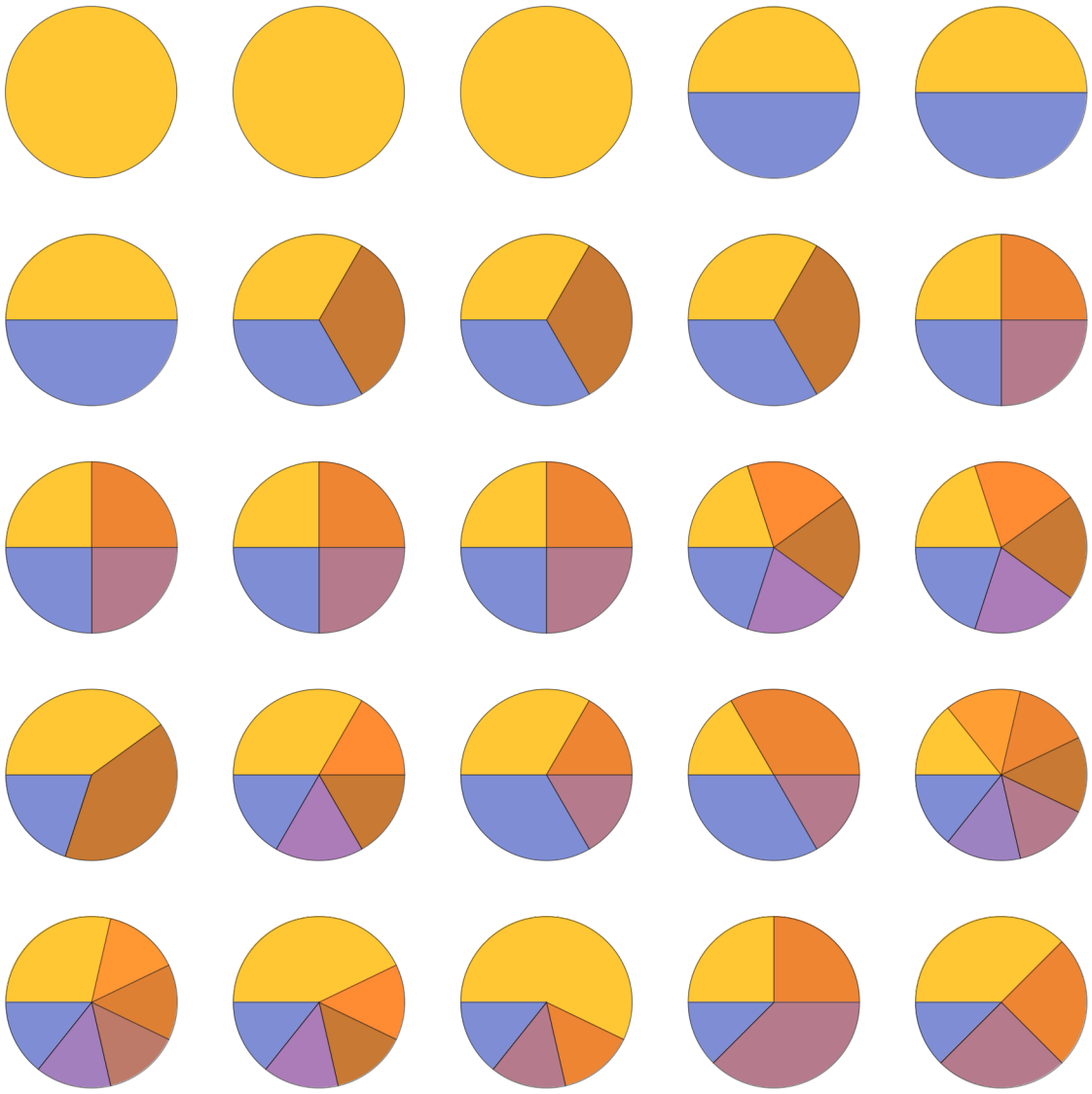
Out[292]=



In[293]:=

```
GraphicsGrid[Partition[Table[PieChart[Counts[IntegerDigits[2^n]]], {n, 25}], 5]]
```

Out[293]=



In[294]:=

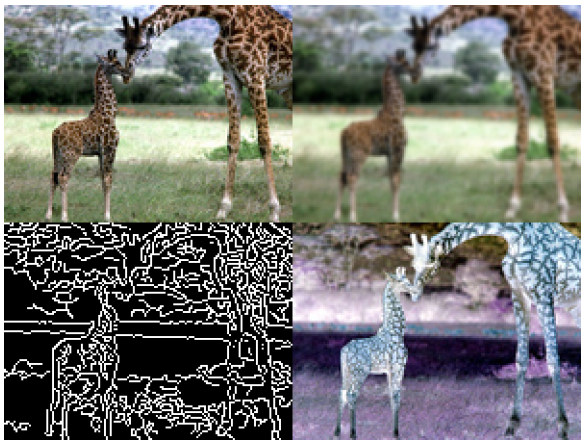
```
GraphicsRow[WordCloud[WikipediaData[#]] & /@ EntityList[ Group of 5 COUNTRIES ]]
```

Out[294]=

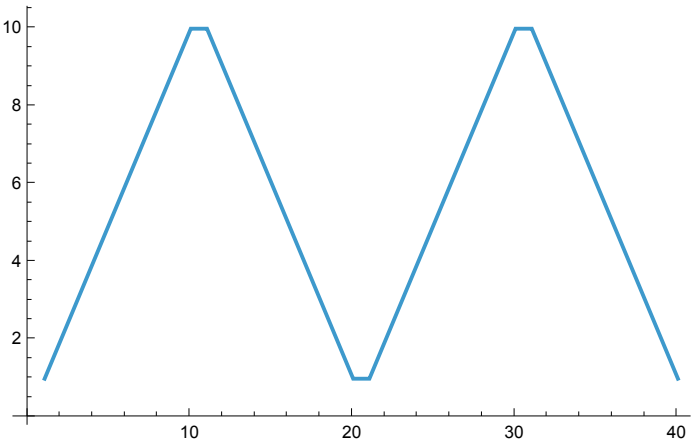
In[295]:=
```
Module[{x = Range[10]}, x = x^2 + x]
```
Out[295]=
```
{2, 6, 12, 20, 30, 42, 56, 72, 90, 110}
```

In[296]:=
```
Module[{x = Table[RandomInteger[100], 10]}, Column[{x, Sort[x], Max[x], Total[x]}]]
```
Out[296]=
```
{73, 9, 77, 29, 39, 94, 26, 98, 8, 51}
{8, 9, 26, 29, 39, 51, 73, 77, 94, 98}
98
504
```

In[297]:=
```
Module[{giraffe = giraffe SPECIES SPECIFICATION [image] },
 ImageCollage[{giraffe, Blur[giraffe], EdgeDetect[giraffe], ColorNegate[giraffe]}]]
```
Out[297]=



In[298]:=
```
Module[{r = Range[10]}, ListLinePlot[Nest[Join[#, Reverse[#]] &, r, 2]]]
```
Out[298]=



In[299]:=
```
Module[{x = Range[10]}, {x + 1, x - 1, Reverse[x]}]
```
Out[299]=
```
{{2, 3, 4, 5, 6, 7, 8, 9, 10, 11},
 {0, 1, 2, 3, 4, 5, 6, 7, 8, 9}, {10, 9, 8, 7, 6, 5, 4, 3, 2, 1}}
```

In[300]:=
```
NestList[Mod[17 # + 2, 11] &, 10, 20]
```
Out[300]=
```
{10, 7, 0, 2, 3, 9, 1, 8, 6, 5, 10, 7, 0, 2, 3, 9, 1, 8, 6, 5, 10}
```

In[301]:=
```
Module[{x = {"a", "e", "i", "o", "u"}}, y = Complement[Alphabet[], x];
 Table[StringJoin[{RandomChoice[y], RandomChoice[x],
    RandomChoice[y], RandomChoice[x], RandomChoice[y]}], 10]]
```
Out[301]=
```
{xixov, behan, bayuv, jumap, tejis, kixux, rehog, vinah, hipad, mebib}
```

In[302]:=