

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}]
```

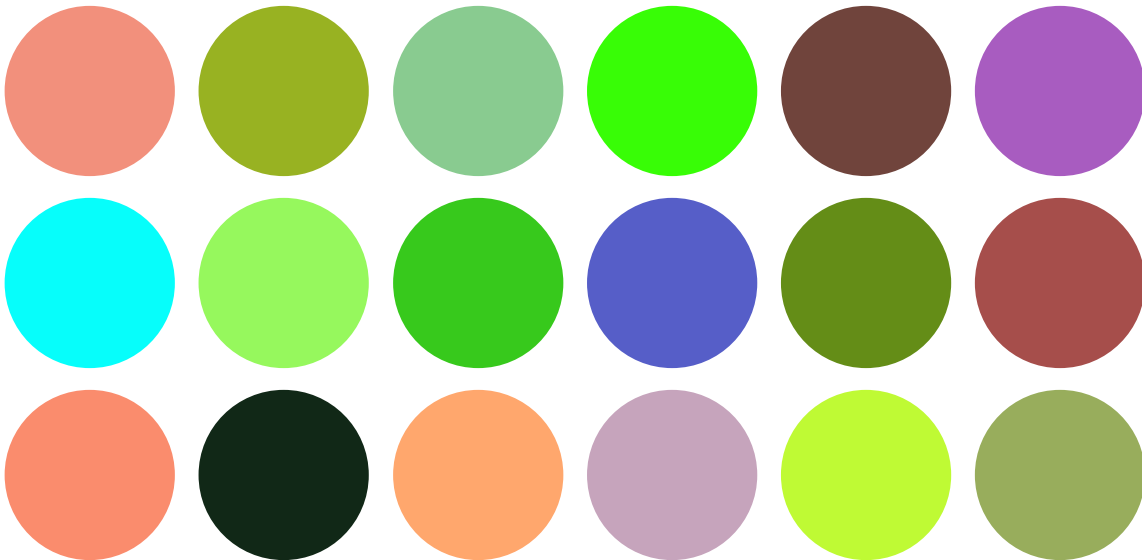
Out[289]=

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

In[290]:=

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

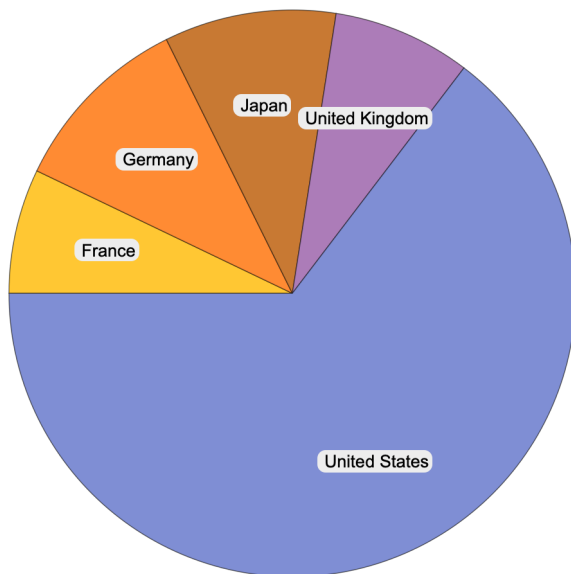
Out[290]=



In[291]:=

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

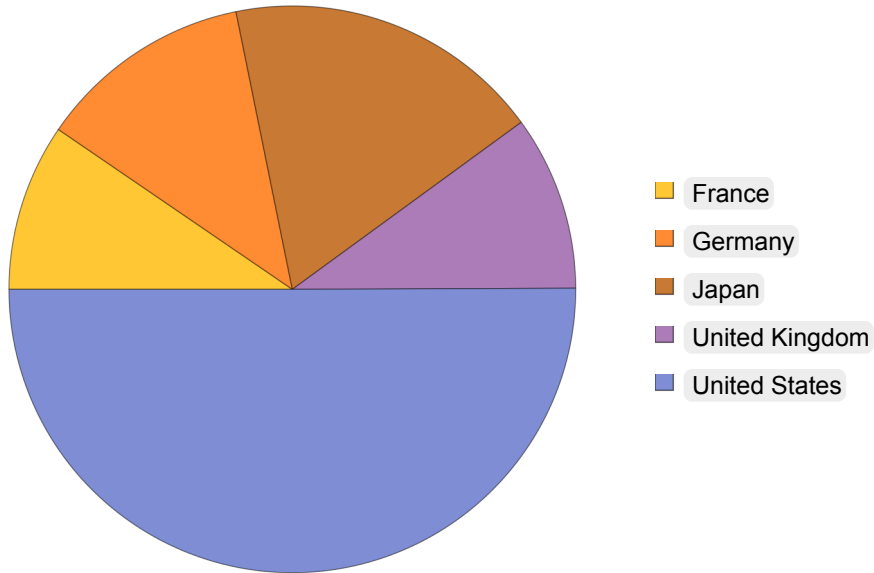
Out[291]=



In[292]:=

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

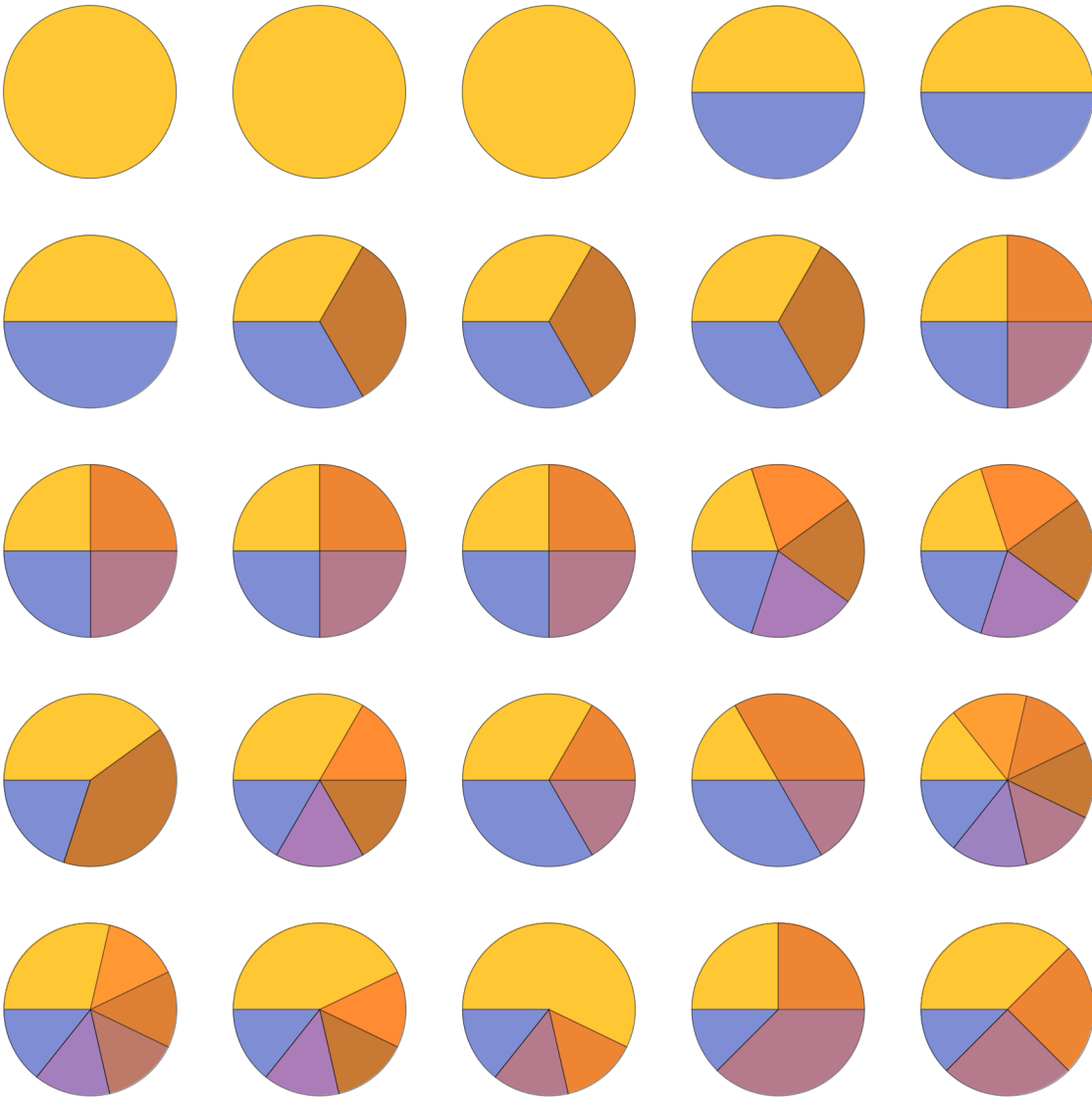
Out[292]=



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]=

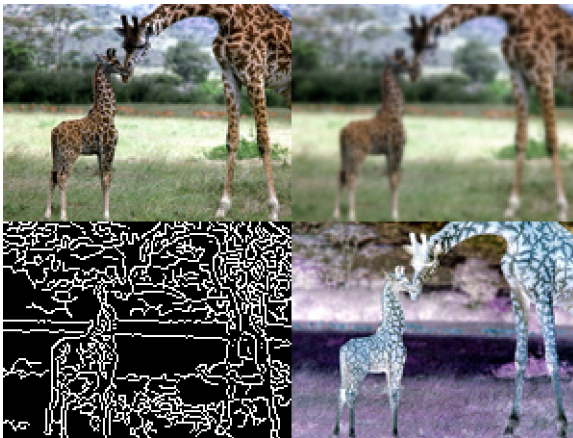
```
{73, 9, 77, 29, 39, 94, 26, 98, 8, 51}
{8, 9, 26, 29, 39, 51, 73, 77, 94, 98}
98
504
```

In[297]:=

```
Module[{giraffe = },
```

```
ImageCollage[{giraffe, Blur[giraffe], EdgeDetect[giraffe], ColorNegate[giraffe]}]]
```

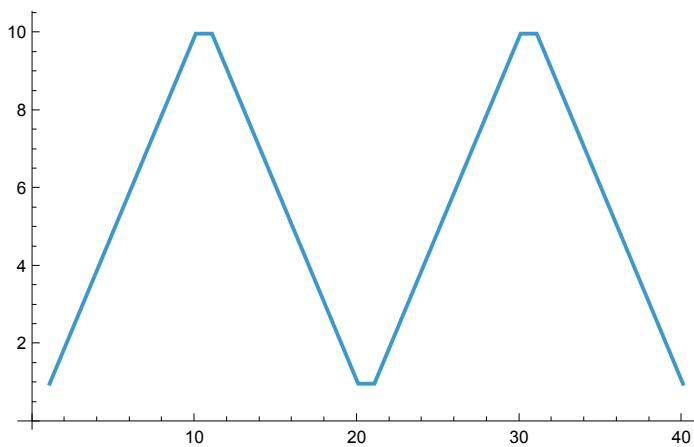
Out[297]=



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]:=