Hexi — 2025-01-17 — PS 1

In[183]:=

```
#Exercise 1
1 + 2 + 3
```

Out[183]=

```
#Exercise
```

Out[184]=

```
6
```

In[185]:=

```
1 + 2 + 3 + 4 + 5
```

Out[185]=

```
15
```

In[186]:=

```
1 * 2 * 3 * 4 * 5
```

Out[186]=

```
120
```

In[187]:=

```
5 ^ 2
```

Out[187]=

```
25
```

In[188]:=

```
3 ^ 4
```

Out[188]=

```
81
```

In[189]:=

```
10 ^ 12
```

Out[189]=

```
1 000 000 000 000
```

In[190]:=

```
3 ^ (7 * 8)
```

Out[190]=

```
523 347 633 027 360 537 213 511 521
```

In[191]:=

```
(4 - 2) * (3 + 4)
```

Out[191]=

```
14
```

In[192]:=
```
29 000 * 73
```
Out[192]=
```
2 117 000
```
In[193]:=

```
-3 + -2 + -1 + 0 + 1 + 2 + 3
```
Out[193]=
```
0
```
In[194]:=
```
24 / 3
```
Out[194]=
```
8
```
In[195]:=
```
5 ^ 100
```
Out[195]=
```
7 888 609 052 210 118 054 117 285 652 827 862 296 732 064 351 090 230 047 702 789 306 640 625
```
In[196]:=
```
100 - 5 ^ 2
```
Out[196]=
```
75
```
In[197]:=
```
6 * 5 ^ 2 + 7
```
Out[197]=
```
157
```
In[198]:=
```
3 ^ 2 - 2 ^ 3
```
Out[198]=
```
1
```
In[199]:=
```
2 ^ 3 * 3 ^ 2
```
Out[199]=
```
72
```
In[200]:=
```
(8 + (-11)) * 2
```
Out[200]=
```
-6
```
In[201]:=

```
#Exercise 2
```
Out[201]=
```
2 #Exercise
```

In[202]:=
```
Plus[7, 6, 5]
```
Out[202]=
```
18
```

In[203]:=
```
Times[2, Plus[3, 4]]
```
Out[203]=
```
14
```

In[204]:=
```
Max[6 * 8, 5 * 9]
```
Out[204]=
```
48
```

In[205]:=
```
RandomInteger[1000]
```
Out[205]=
```
858
```

In[206]:=
```
Plus[RandomInteger[10], 10]
```
Out[206]=
```
13
```

In[207]:=
```
Times[5, 4, 3, 2]
```
Out[207]=
```
120
```

In[208]:=
```
Subtract[2, 3]
```
Out[208]=
```
-1
```

In[209]:=
```
Times[Plus[8, 7], Plus[9, 2]]
```
Out[209]=
```
165
```

In[210]:=
```
Divide[Subtract[26, 89], 9]
```
Out[210]=
```
-7
```

In[211]:=
```
Subtract[100, Power[5, 2]]
```
Out[211]=
```
75
```

In[212]:=
```
Max[3^5, 5^3]
```
Out[212]=
```
243
```

In[213]:=
```
Times [3, Max[3^4, 4^3]]
```
Out[213]=
```
243
```

In[214]:=
```
Plus[RandomInteger[1000], RandomInteger[1000]]
```
Out[214]=
```
1123
```

In[215]:=

In[216]:=
```
#Exercise 3
```
Out[216]=
```
3 #Exercise
```

In[217]:=
```
Range[4]
```
Out[217]=
```
{1, 2, 3, 4}
```

In[218]:=
```
Range[100]
```
Out[218]=
```
{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[219]:=
```
Reverse[Range[4]]
```
Out[219]=
```
{4, 3, 2, 1}
```

In[220]:=
```
Reverse[Range[50]]
```
Out[220]=
```
{50, 49, 48, 47, 46, 45, 44, 43, 42, 41, 40, 39, 38, 37,
 36, 35, 34, 33, 32, 31, 30, 29, 28, 27, 26, 25, 24, 23, 22, 21, 20,
 19, 18, 17, 16, 15, 14, 13, 12, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1}
```

In[221]:=
```
Join[Range[4], Reverse[Range[4]]]
```
Out[221]=
```
{1, 2, 3, 4, 4, 3, 2, 1}
```

In[222]:=
```
Join[Range[100], Reverse[Range[100]]]
```
Out[222]=
```
{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,
 100, 99, 98, 97, 96, 95, 94, 93, 92, 91, 90, 89, 88, 87, 86, 85, 84, 83, 82,
 81, 80, 79, 78, 77, 76, 75, 74, 73, 72, 71, 70, 69, 68, 67, 66, 65, 64, 63, 62,
 61, 60, 59, 58, 57, 56, 55, 54, 53, 52, 51, 50, 49, 48, 47, 46, 45, 44, 43, 42,
 41, 40, 39, 38, 37, 36, 35, 34, 33, 32, 31, 30, 29, 28, 27, 26, 25, 24, 23,
 22, 21, 20, 19, 18, 17, 16, 15, 14, 13, 12, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1}
```

In[223]:=
```
Range[RandomInteger[10]]
```
Out[223]=
```
{1, 2, 3, 4, 5, 6, 7, 8, 9}
```

In[224]:=
```
Join[{1, 2}, {3, 4}, {5}]
```
Out[224]=
```
{1, 2, 3, 4, 5}
```

In[225]:=
```
Join[Range[10], Range[10], Range[5]]
```
Out[225]=
```
{1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 1, 2, 3, 4, 5}
```

In[226]:=
```
Join[Range[20], Reverse[Range[20]]]
```
Out[226]=
```
{1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19,
 20, 20, 19, 18, 17, 16, 15, 14, 13, 12, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1}
```

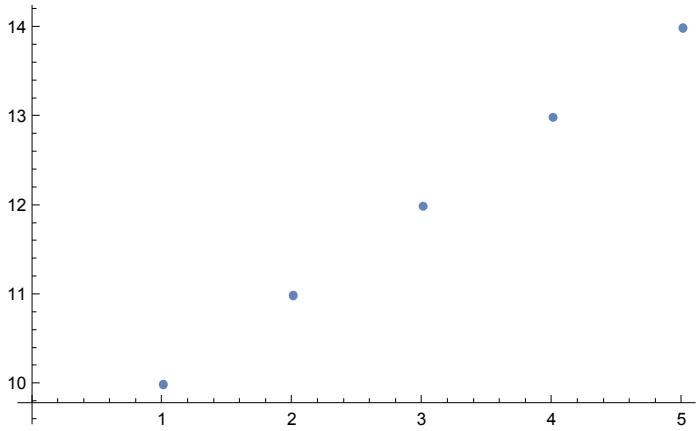
In[227]:=
```
Reverse[Reverse[{1, 2, 3, 4}]]
```
Out[227]=
```
{1, 2, 3, 4}
```

In[228]:=
```
Join[Range[5], Reverse[Range[4]]]
```
Out[228]=
```
{1, 2, 3, 4, 5, 4, 3, 2, 1}
```

In[229]:=
```
Join[Reverse[Range[3]], Reverse[Range[4]], Reverse[Range[5]]]
```
Out[229]=
```
{3, 2, 1, 4, 3, 2, 1, 5, 4, 3, 2, 1}
```

In[230]:=
```
ListPlot[{10, 11, 12, 13, 14}]
```

Out[230]=



In[231]:=
```
Join[Range[10], Reverse[Range[10]], Range[10]]
```

Out[231]=
```
{1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10}
```

In[232]:=
```
{1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 10, 9, 8,
 7, 6, 5, 4, 3, 2, 1, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10}
```

Out[232]=
```
{1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10}
```

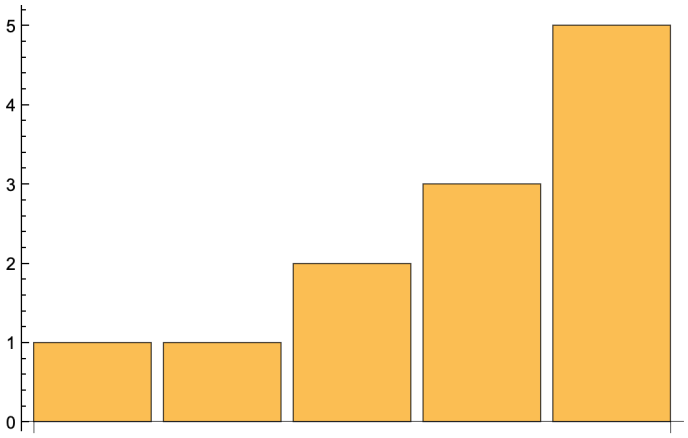
In[233]:=
```
#Exercise 4
```

Out[233]=
```
4 #Exercise
```

In[234]:=

```
BarChart[{1, 1, 2, 3, 5}]
```

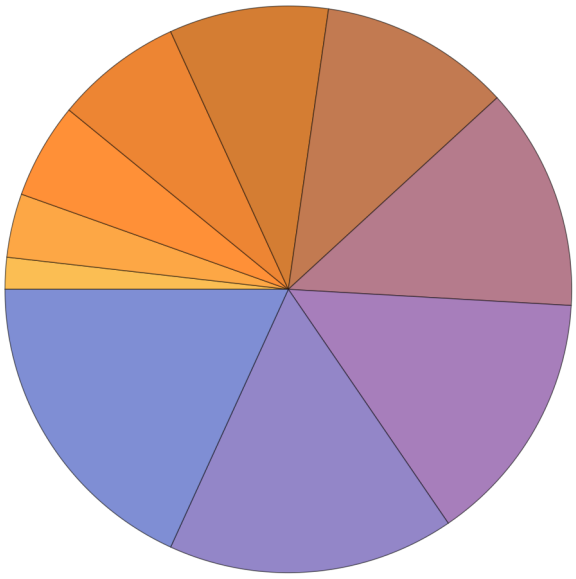
Out[234]=



In[235]:=

```
PieChart[Range[10]]
```

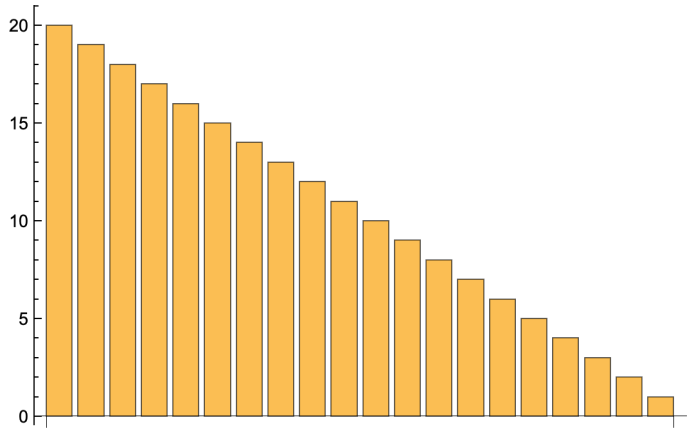
Out[235]=



In[236]:=

```
BarChart[Reverse[Range[20]]]
```

Out[236]=



In[237]:=

```
Column[Range[5]]
```

Out[237]=

1
2
3
4
5

In[238]:=

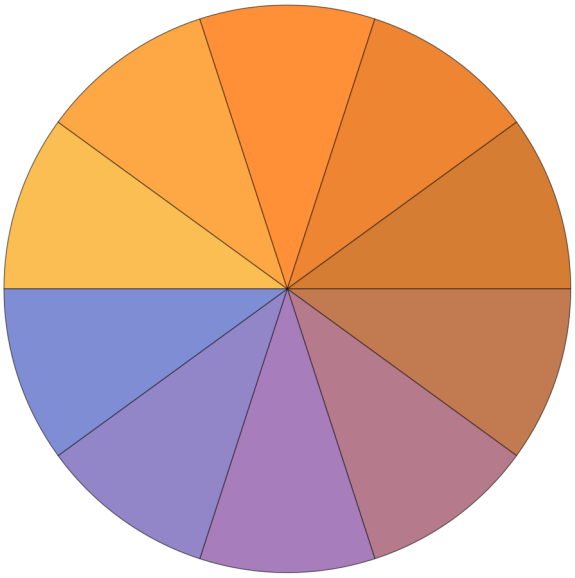
```
NumberLinePlot[{1, 4, 9, 16, 25}]
```

Out[238]=

In[239]:=

```
PieChart[{1, 1, 1, 1, 1, 1, 1, 1, 1, 1}]
```

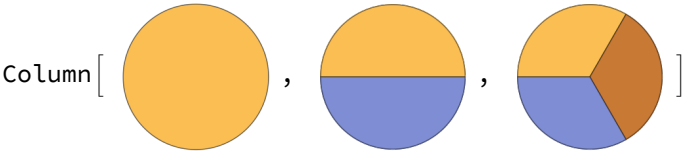
Out[239]=



In[240]:=

```
Column[PieChart[{1}], PieChart[{1, 1}], PieChart[{1, 1, 1}]]
```

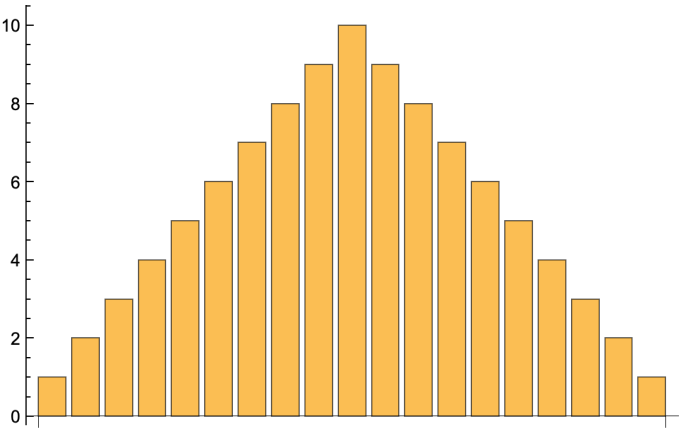
Out[240]=



In[241]:=

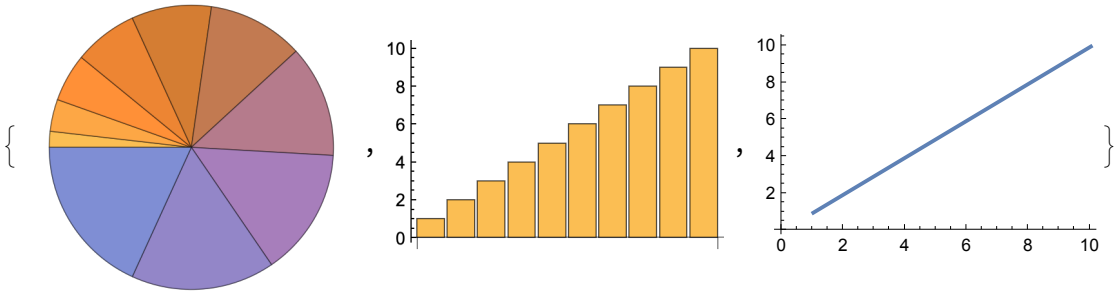
```
BarChart[Join[Range[10], Reverse[Range[9]]]]
```

Out[241]=



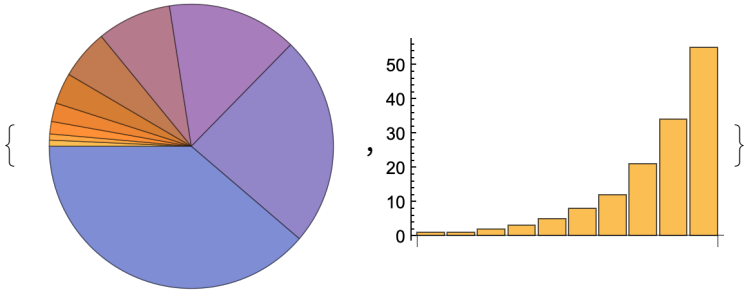
In[242]:=
```
{PieChart[Range[10]], BarChart[Range[10]], ListLinePlot[Range[10]]}
```

Out[242]=



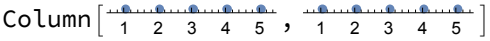
In[243]:=
```
{PieChart[{1, 1, 2, 3, 5, 8, 12, 21, 34, 55}],
 BarChart[{1, 1, 2, 3, 5, 8, 12, 21, 34, 55}]}
```

Out[243]=



In[244]:=
```
Column[NumberLinePlot[Range[5]], NumberLinePlot[Range[5]]]
```

Out[244]=



In[245]:=
```
NumberLinePlot[{1 / 2, 1 / 3, 1 / 4, 1 / 5, 1 / 6, 1 / 7, 1 / 8, 1 / 9}]
```

Out[245]=