

# Tables

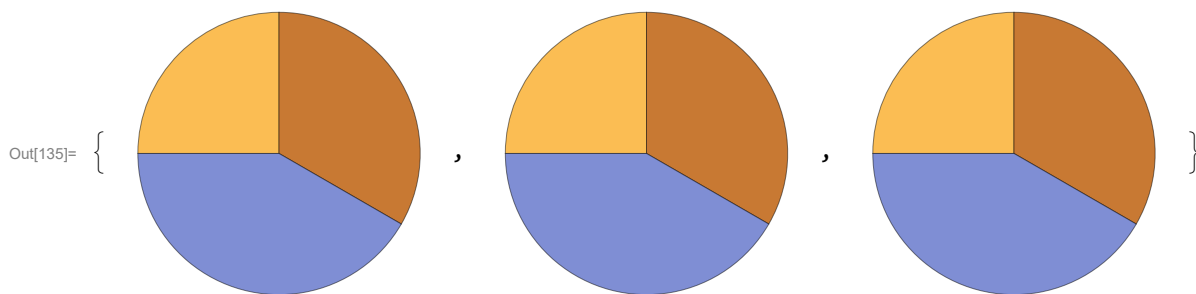
In[133]:= **Table**[ $n^2$ , {**n**, 1, 5}]

Out[133]= {1, 4, 9, 16, 25}

In[134]:= **Table**[2, 5]

Out[134]= {2, 2, 2, 2, 2}

In[135]:= **Table**[**PieChart**[{3, 4, 5}], 3]



In[136]:= **Table**[**a**[**n**], {**n**, 2, 7}]

Out[136]= {**a**[2], **a**[3], **a**[4], **a**[5], **a**[6], **a**[7]}

In[137]:= **f**[**a\_**] :=  $\frac{n}{2}$

In[138]:= **Table**[**f**[**n**], {**n**, 16}]

Out[138]= { $\frac{1}{2}$ , 1,  $\frac{3}{2}$ , 2,  $\frac{5}{2}$ , 3,  $\frac{7}{2}$ , 4,  $\frac{9}{2}$ , 5,  $\frac{11}{2}$ , 6,  $\frac{13}{2}$ , 7,  $\frac{15}{2}$ , 8}

In[139]:= **Table**[**Range**[1, **n**], {**n**, 11, 5}]

... **Table**: Iterator {**n**, **l**, 5} does not have appropriate bounds.

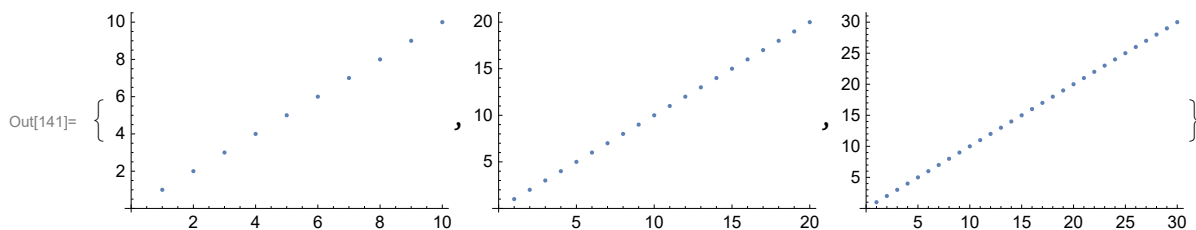
... **Table**: Iterator {**n**, **l**, 5} does not have appropriate bounds.

Out[139]= **Table**[**Range**[1, **n**], {**n**, 1, 5}]

In[140]:= **Table**[**Range**[1, **n**], {**n**, 1, 5}]

Out[140]= {{1}, {1, 2}, {1, 2, 3}, {1, 2, 3, 4}, {1, 2, 3, 4, 5}}

In[141]:= **Table**[**ListPlot**[**Range**[10 \* **n**]], {**n**, 3}]



In[142]:= **Table**[Range[10 \* n], {n, 3}]

Out[142]= { {1, 2, 3, 4, 5, 6, 7, 8, 9, 10},  
 {1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20}, {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} }

In[143]:= **Table**[Range[10 \* n], {n, 3}]

Out[143]= { {1, 2, 3, 4, 5, 6, 7, 8, 9, 10},  
 {1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20}, {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} }

In[144]:= **Table**[2<sup>n</sup>, {n, 1, 3}]

Out[144]= {2, 4, 8}

In[145]:= **Table**[f[n], {n, 4, 10, 2}]

Out[145]= {2, 3, 4, 5}

In[146]:= **Table**[a[n], {n, {1, 2, 3, 4}}]

Out[146]= {a[1], a[2], a[3], a[4]}

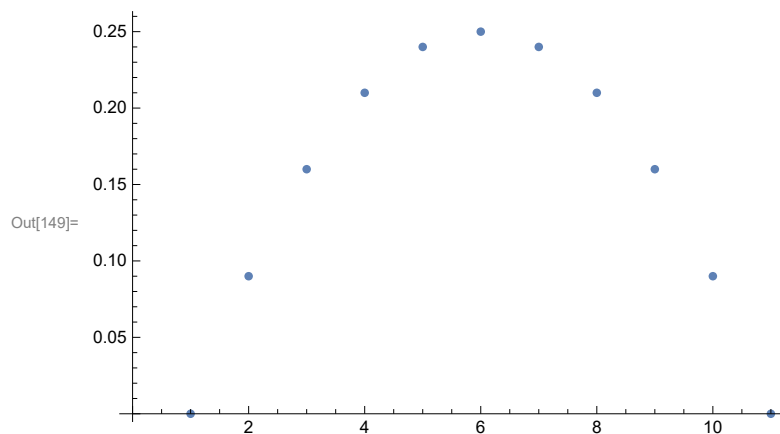
In[147]:= **Table**[RandomInteger[10], {20}]

Out[147]= {3, 9, 6, 8, 5, 2, 4, 6, 2, 7, 10, 2, 8, 3, 3, 8, 8, 10, 6, 0}

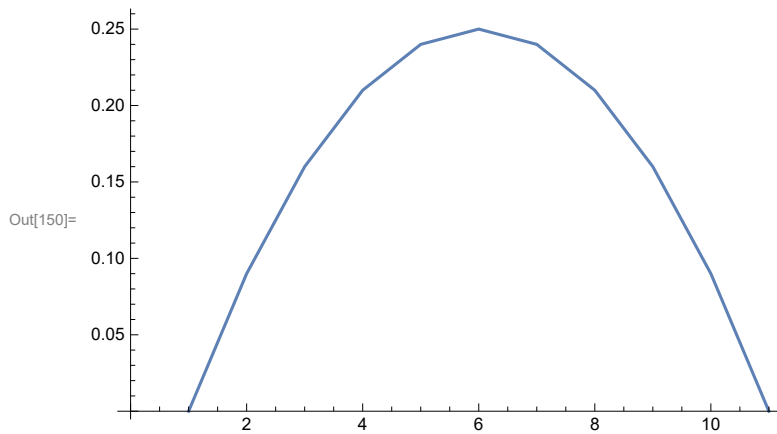
In[148]:= **Table**[x - x<sup>2</sup>, {x, 0, 1, 0.1}]

Out[148]= {0., 0.09, 0.16, 0.21, 0.24, 0.25, 0.24, 0.21, 0.16, 0.09, 0.}

In[149]:= **ListPlot**[Table[x - x<sup>2</sup>, {x, 0, 1, 0.1}]]



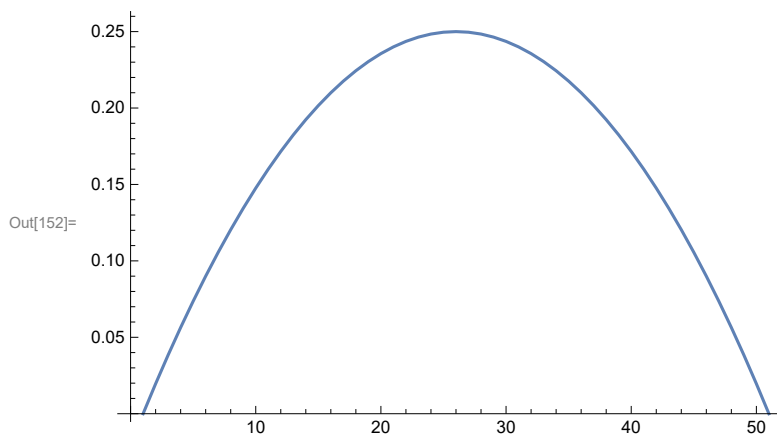
In[150]:= **ListLinePlot**[**Table**[ $x - x^2$ , {**x**, 0, 1, 0.1}]]



In[151]:= **Range**[0, 1, 0.02] - **Range**[0, 1, 0.02]<sup>2</sup>

Out[151]= {0., 0.0196, 0.0384, 0.0564, 0.0736, 0.09, 0.1056, 0.1204, 0.1344, 0.1476, 0.16, 0.1716, 0.1824, 0.1924, 0.2016, 0.21, 0.2176, 0.2244, 0.2304, 0.2356, 0.24, 0.2436, 0.2464, 0.2484, 0.2496, 0.25, 0.2496, 0.2484, 0.2464, 0.2436, 0.24, 0.2356, 0.2304, 0.2244, 0.2176, 0.21, 0.2016, 0.1924, 0.1824, 0.1716, 0.16, 0.1476, 0.1344, 0.1204, 0.1056, 0.09, 0.0736, 0.0564, 0.0384, 0.0196, 0.}

In[152]:= **ListLinePlot**[**Range**[0, 1, 0.02] - **Range**[0, 1, 0.02]<sup>2</sup>]

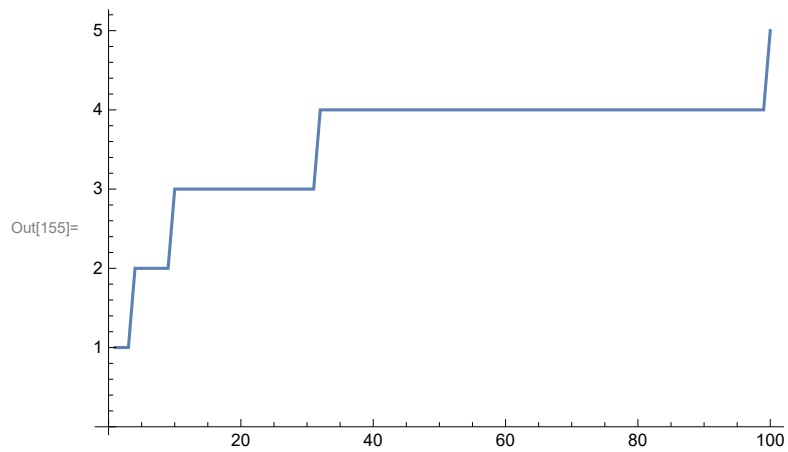


In[153]:= **FactorialZeros**[**n\_Integer**] := **Total**[**Drop**[**FixedPointList**[**Floor**[# / 5] &, **n**], 1]]

In[154]:= **FactorialZeros**[6]

Out[154]= 1

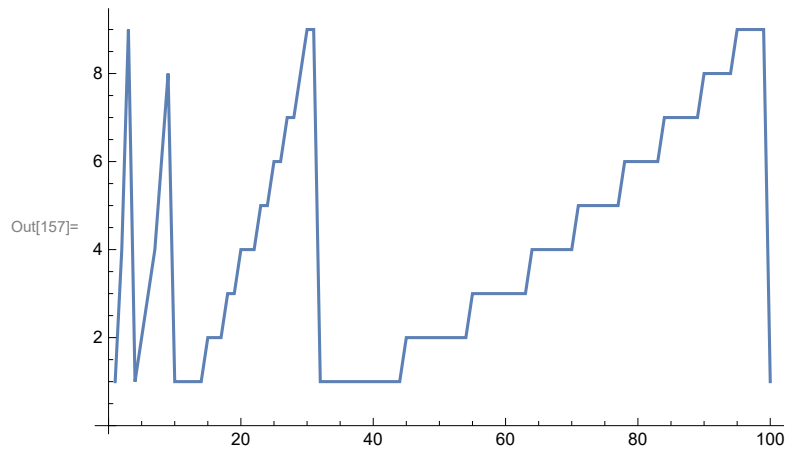
```
In[155]:= ListLinePlot[Length /@ IntegerDigits[Power[Range[100], 2]]]
```



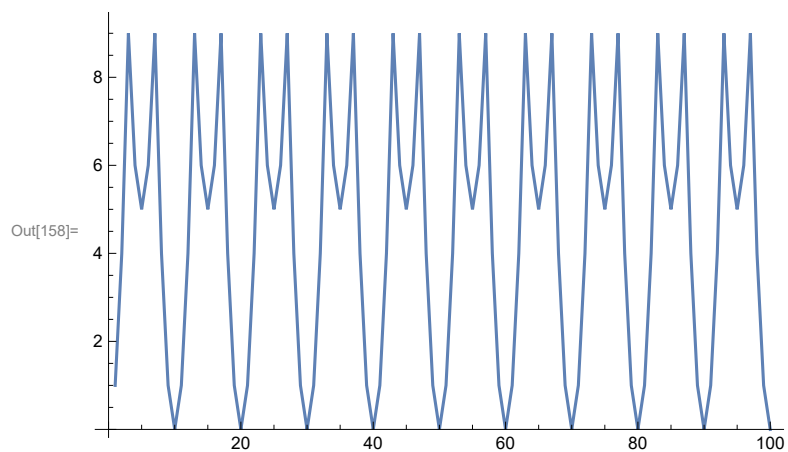
```
In[156]:= First /@ IntegerDigits[Power[Range[20], 2]]
```

Out[156]= {1, 4, 9, 1, 2, 3, 4, 6, 8, 1, 1, 1, 1, 1, 2, 2, 2, 3, 3, 4}

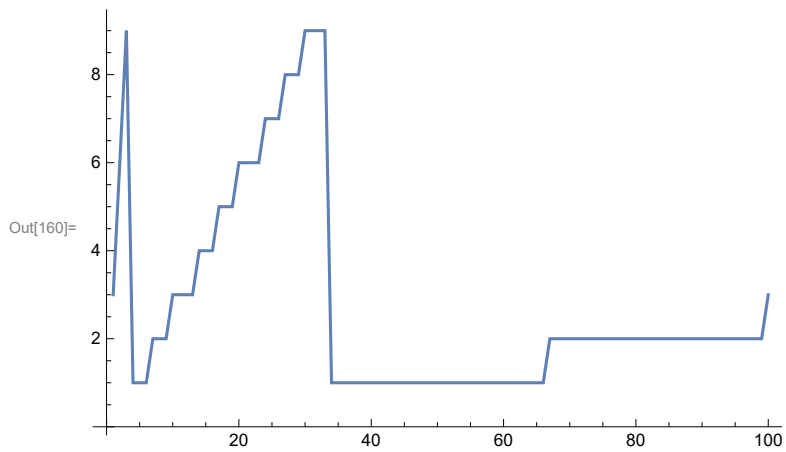
```
In[157]:= ListLinePlot[First /@ IntegerDigits[Power[Range[100], 2]]]
```



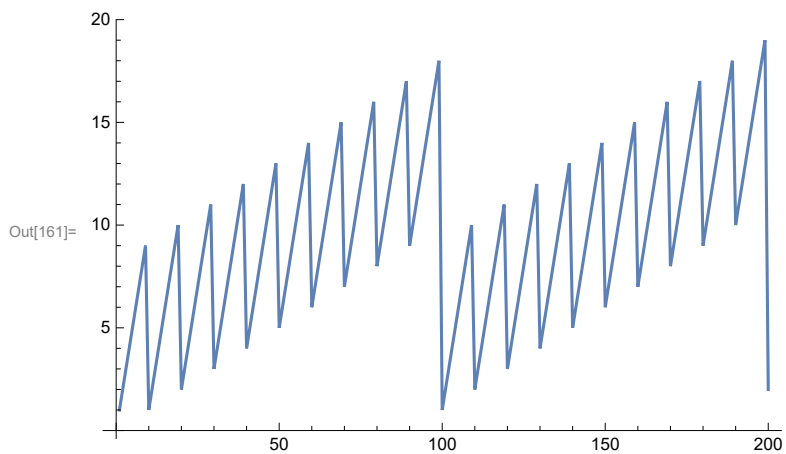
```
In[158]:= ListLinePlot[Last /@ IntegerDigits[Power[Range[100], 2]]]
```



In[160]:= **ListLinePlot**[**First** /@ **IntegerDigits**[**Table**[ $n * 3$ , { $n$ , 1, 100}]]]



In[161]:= **ListLinePlot**[**Total** /@ **IntegerDigits**[**Table**[ $n$ , { $n$ , 1, 200}]]]



In[162]:= **ListLinePlot**[**Total** /@ **IntegerDigits**[**Table**[ $n^2$ , { $n$ , 1, 100}]]]

