Jeremy — PS 2 — 2025-01-21

Exercises from EIWL3 Section 5

In[•]:=
```
Reverse[Table[n^2, {n, 10}]]
```

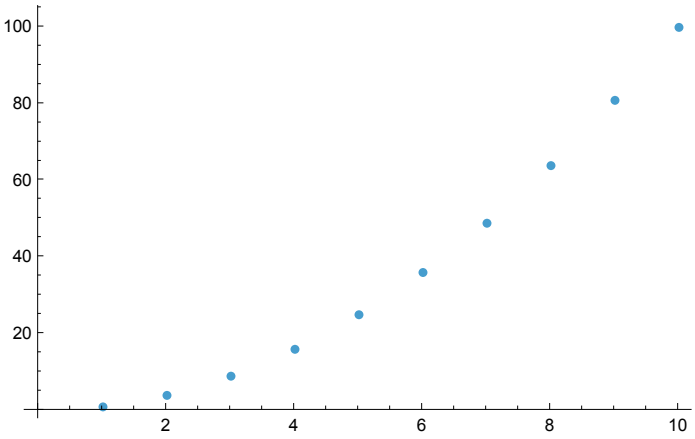
Out[•]=
```
{100, 81, 64, 49, 36, 25, 16, 9, 4, 1}
```

In[•]:=
```
Total[Table[n^2, {n, 10}]]
```

Out[•]=
```
385
```

In[•]:=
```
ListPlot[Table[n^2, {n, 10}]]
```

Out[•]=



In[•]:=
```
Sort[Join[Range[4], Range[4]]]
```

Out[•]=
```
{1, 1, 2, 2, 3, 3, 4, 4}
```

In[•]:=
```
Range[10, 20]
```

Out[•]=
```
{10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20}
```

In[•]:=
```
Sort[Join[Table[n^2, {n, 5}], Table[n^3, {n, 5}]]]
```

Out[•]=
```
{1, 1, 4, 8, 9, 16, 25, 27, 64, 125}
```

In[•]:=
```
Length[IntegerDigits[2^128]]
```

Out[•]=
```
39
```

In[•]:=
```
First[IntegerDigits[2^32]]
```
Out[•]=
```
4
```

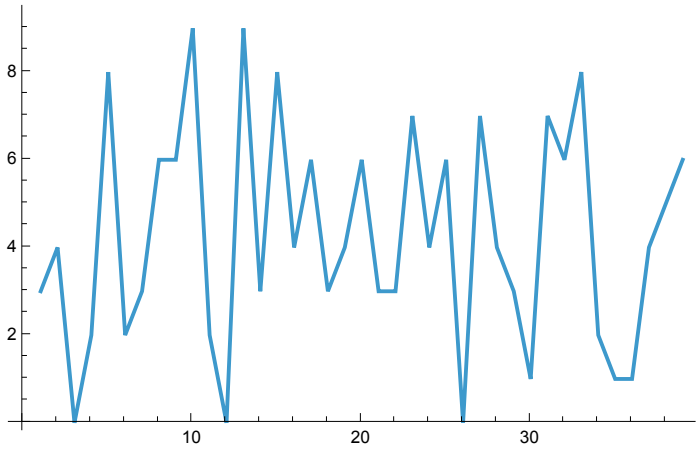
In[•]:=
```
Table[Part[IntegerDigits[2^100], n], {n, 10}]
```
Out[•]=
```
{1, 2, 6, 7, 6, 5, 0, 6, 0, 0}
```

In[•]:=
```
Last[Sort[IntegerDigits[2^20]]]
```
Out[•]=
```
8
```

In[•]:=
```
Count[IntegerDigits[2^1000], 0]
```
Out[•]=
```
28
```

In[•]:=
```
Part[Sort[IntegerDigits[2^20]], 2]
```
Out[•]=
```
1
```

In[•]:=
```
ListLinePlot[IntegerDigits[2^128]]
```
Out[•]=



In[•]:=
```
Drop[Take[Range[100], 20], 10]
```
Out[•]=
```
{11, 12, 13, 14, 15, 16, 17, 18, 19, 20}
```

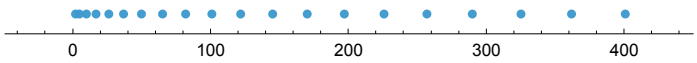
Exercises from EIWL3 Section 6

In[•]:=
```
Table[1000, 5]
```
Out[•]=
```
{1000, 1000, 1000, 1000, 1000}
```

In[•]:=
```
Table[n^3, {n, 10, 20}]
```
Out[•]=
```
{1000, 1331, 1728, 2197, 2744, 3375, 4096, 4913, 5832, 6859, 8000}
```

In[•]:=
```
NumberLinePlot[Table[n^2, {n, 20}]]
```

Out[•]=



In[•]:=
```
Table[n*2, {n, 10}]
```

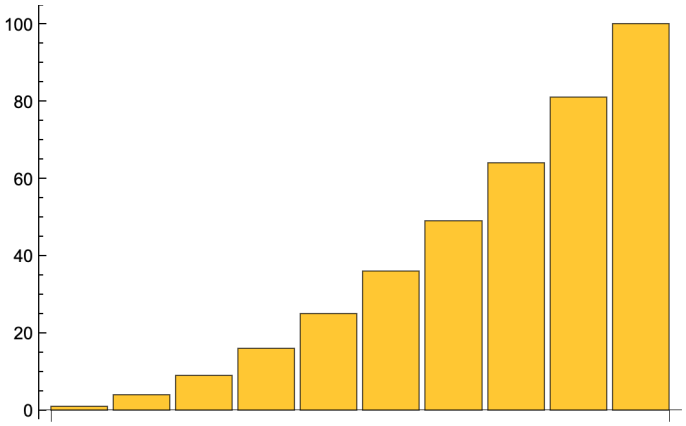
Out[•]=
```
{2, 4, 6, 8, 10, 12, 14, 16, 18, 20}
```

In[•]:=
```
Table[n, {n, 10}]
```

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

In[•]:=
```
BarChart[Table[n^2, {n, 10}]]
```

Out[•]=

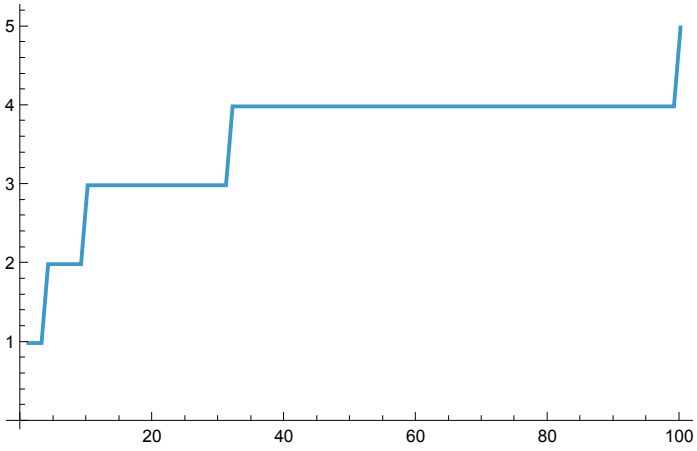


In[•]:=
```
Table[IntegerDigits[n^2], {n, 10}]
```

Out[•]=
```
{{1}, {4}, {9}, {1, 6}, {2, 5}, {3, 6}, {4, 9}, {6, 4}, {8, 1}, {1, 0, 0}}
```

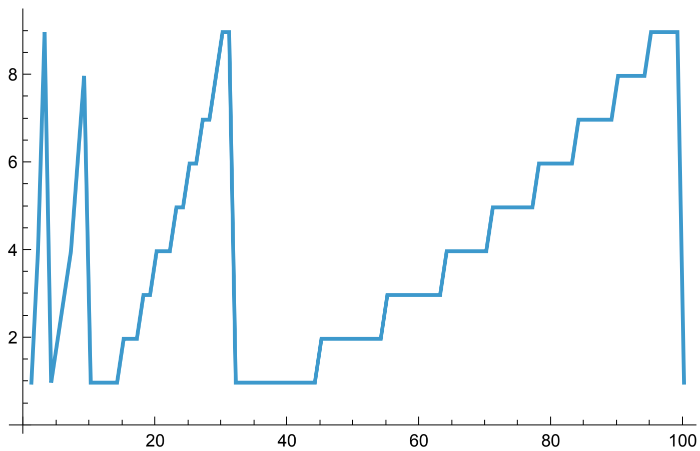
In[•]:=
```
ListLinePlot[Table[Length[IntegerDigits[n^2]], {n, 100}]]
```

Out[•]=



In[∘]:=
```
Table[Part[IntegerDigits[n^2], 1], {n, 20}]
```
Out[∘]=
```
{1, 4, 9, 1, 2, 3, 4, 6, 8, 1, 1, 1, 1, 1, 2, 2, 2, 3, 3, 4}
```

In[∘]:=
```
ListLinePlot[Table[Part[IntegerDigits[n^2], 1], {n, 100}]]
```
Out[∘]=



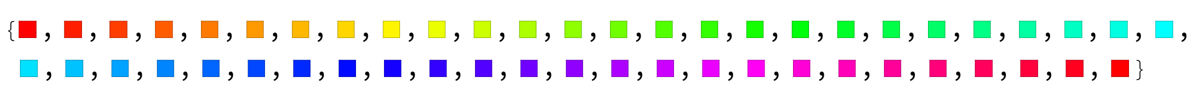
Exercises from EIWL3 Section 7

In[∘]:=
```
{Red, Yellow, Green}
```
Out[∘]=

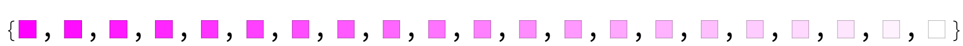
In[∘]:=
```
Column[{Red, Yellow, Green}]
```
Out[∘]=

In[∘]:=
```
ColorNegate[Orange]
```
Out[∘]=

In[∘]:=
```
Table[Hue[n], {n, 0, 1, 0.02}]
```
Out[∘]=



In[∘]:=
```
Table[RGBColor[1, n, 1], {n, 0, 1, 0.05}]
```
Out[∘]=



In[∘]:=
```
Blend[{Pink, Yellow}]
```
Out[∘]=

In[•]:=
```
Table[Blend[{Yellow, Hue[n]}], {n, 0, 1, 0.05}]
```

Out[•]=

In[•]:=
```
Table[{n, Hue[n]}, {n, 0, 1, 0.1}]
```

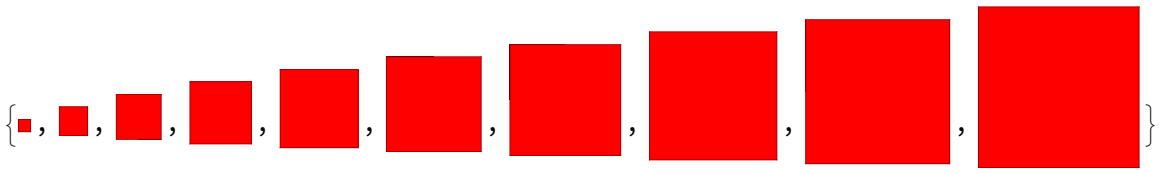
Out[•]=
```
{{0., }, {0.1, }, {0.2, }, {0.3, }, {0.4, },
 {0.5, }, {0.6, }, {0.7, }, {0.8, }, {0.9, }, {1., }}
```

In[•]:=
```
Style[Purple, 100]
```

Out[•]=

In[•]:=
```
Table[Style[Red, n], {n, 10, 100, 10}]
```

Out[•]=



In[•]:=
```
Style[Style[999, Red], 100]
```

Out[•]=

999

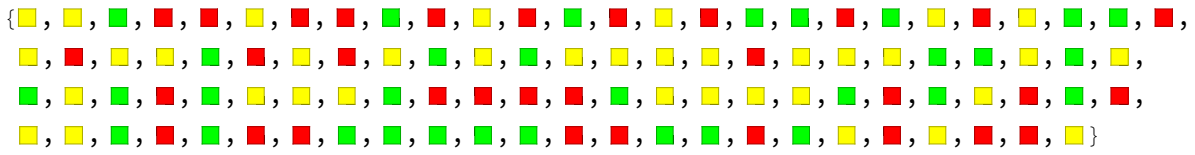
In[•]:=
```
Table[Style[n^2, n^2], {n, 10}]
```

Out[•]=

1 4 9 16 25 36 49 64 81 100

In[•]:=
```
Table[Part[{Red, Yellow, Green}, RandomInteger[2] + 1], 100]
```

Out[•]=



```
In[•]:= Table[Style[Part[IntegerDigits[2^1000], n],
          3 * Part[IntegerDigits[2^1000], n]], {n, 50}]
```

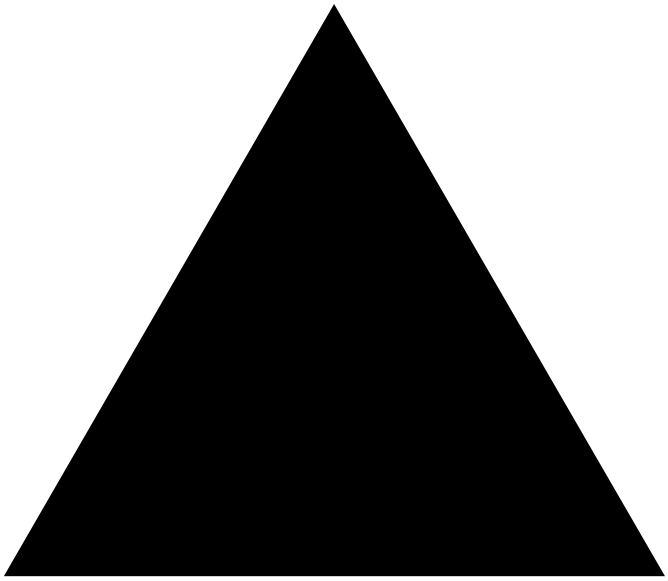
Out[•]=

{1, , 7, 1, 5, , 8, 6, , 7, 1, 8, 6, 2, 6, 7, 3, 2, , 9, 4, 8, 4, 2, 5,
, 4, 9, , 6, , , , 1, 8, 1, , 5, 6, 1, 4, , 4, 8, 1, 1, 7, , 5, 5}

Exercises from EIWL3 Section 8

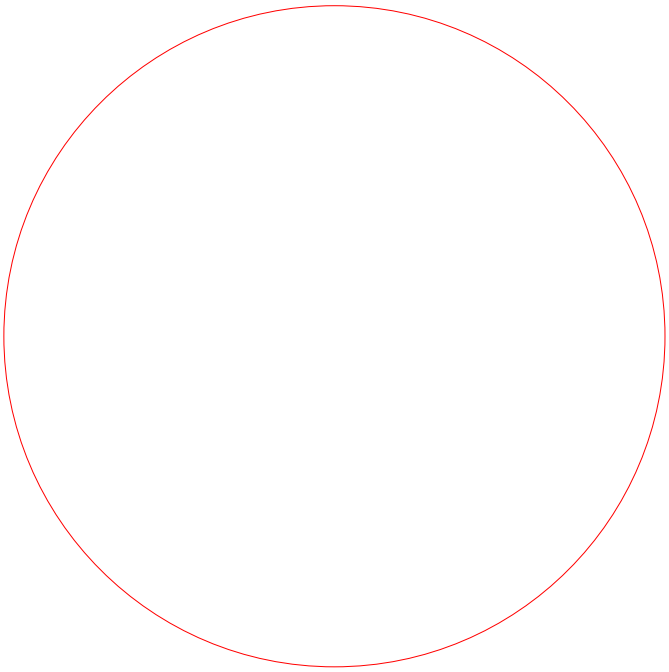
```
In[•]:= Graphics[RegularPolygon[3]]
```

Out[•]=



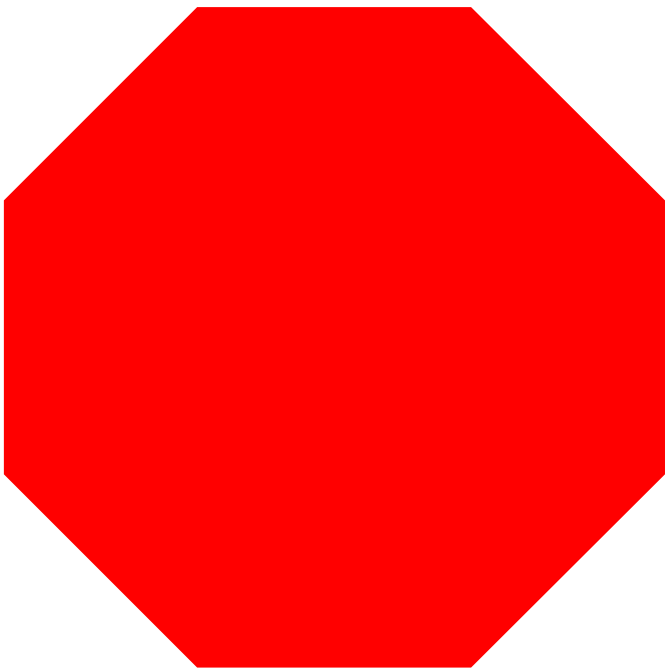
In[ ]:=
```
Graphics[Style[Circle[], Red]]
```

Out[ ]=



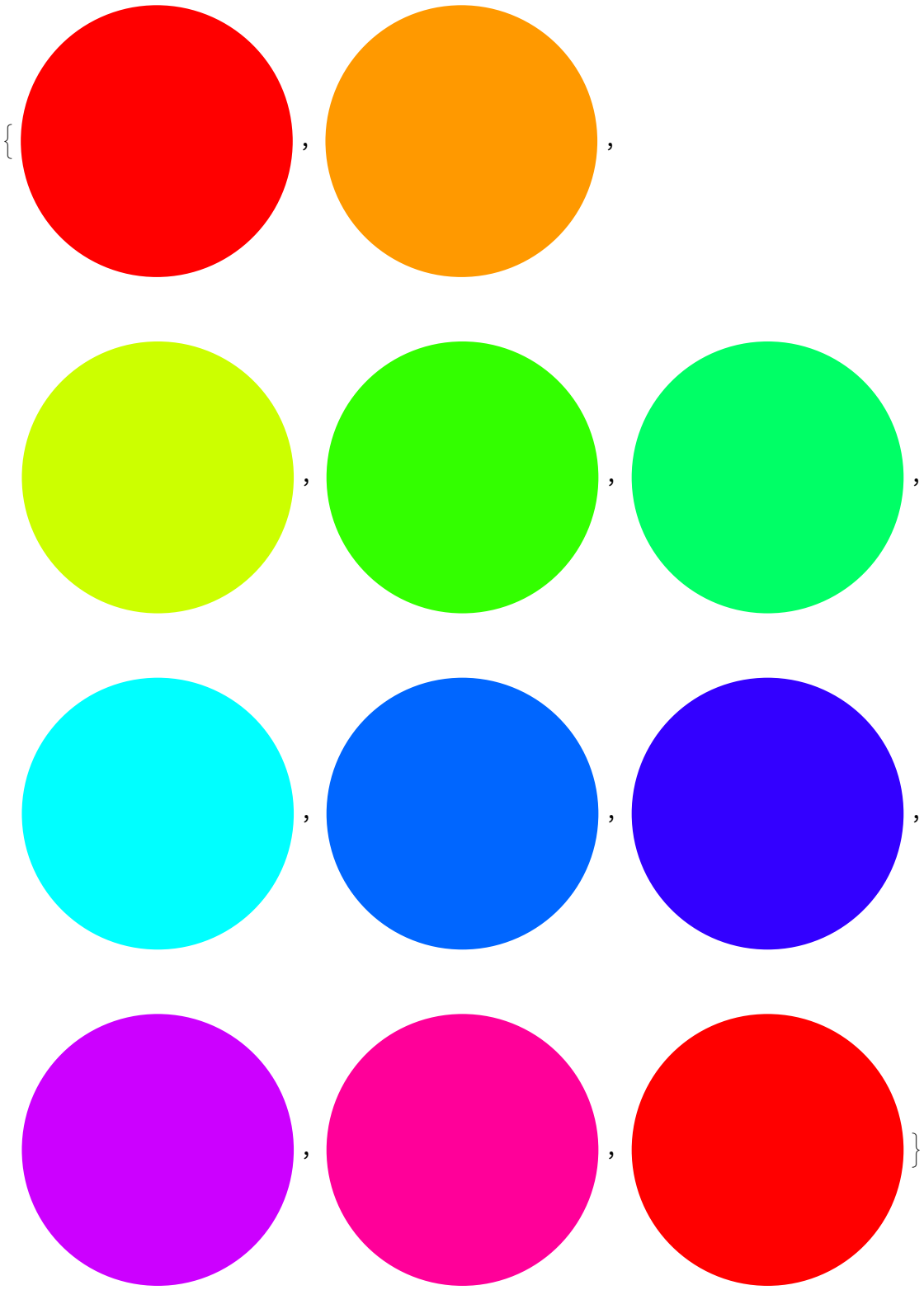
In[ ]:=
```
Graphics[Style[RegularPolygon[8], Red]]
```

Out[ ]=



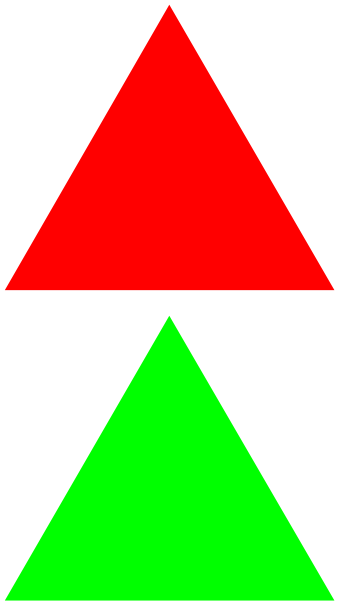
In[•]:=
```
Table[Graphics[Style[Disk[], Hue[n]]], {n, 0, 1, 0.1}]
```

Out[•]=



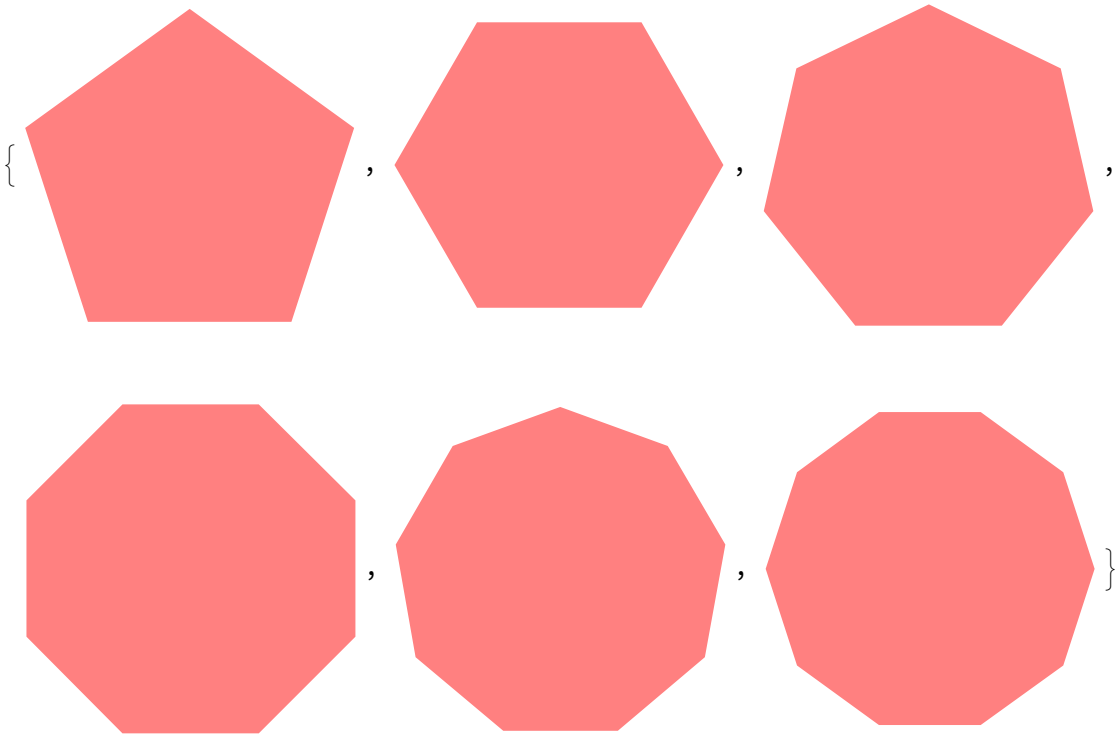
In[ ]:=
```
Column[{Graphics[Style[RegularPolygon[3], Red]],
  Graphics[Style[RegularPolygon[3], Green]]}]
```

Out[ ]=



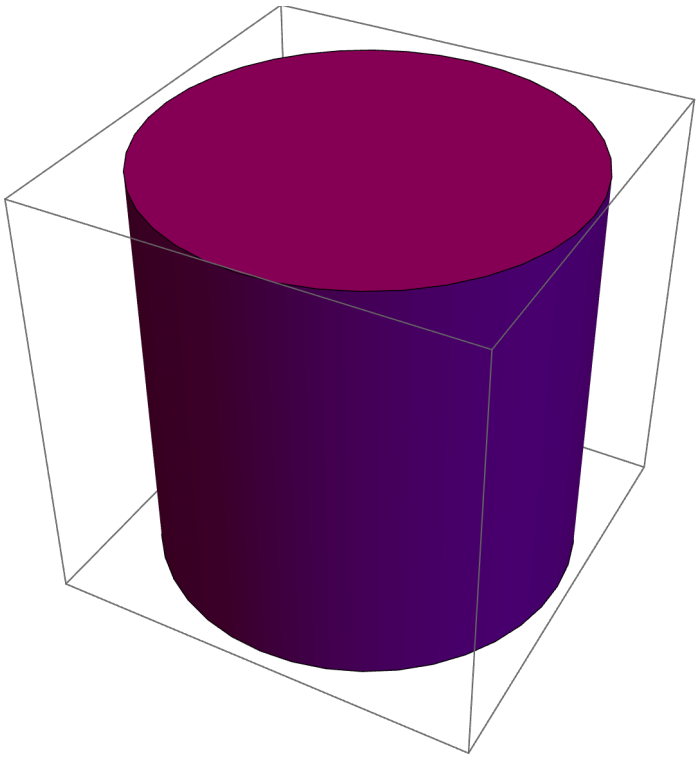
In[ ]:=
```
Table[Graphics[Style[RegularPolygon[n], Pink]], {n, 5, 10}]
```

Out[ ]=



In[•]:=
```
Graphics3D[Style[Cylinder[], Purple]]
```

Out[•]=



In[•]:=
```
Graphics[Table[Style[RegularPolygon[9 - n], RandomColor[]], {n, 0, 6}]]
```

Out[•]=