

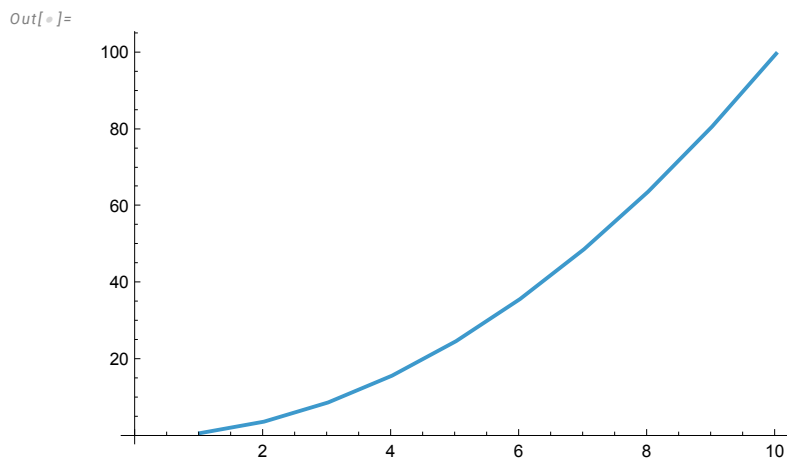
Eli Lerner PSet 2

```
In[*]:= {Reverse[Range[10]]} ^ 2
```

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

```
In[*]:= Total[Range[10] ^ 2]  
ListLinePlot[Range[10] ^ 2]  
Sort[Join[Range[4], Range[4]]]  
Length[IntegerDigits[2 ^ 128]]  
First[IntegerDigits[2 ^ 32]]  
Take[IntegerDigits[2 ^ 100], 10]
```

```
Out[*]:= 385
```



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

```
Out[*]:= 39
```

```
Out[*]:= 4
```

```
Out[*]:= {1, 2, 6, 7, 6, 5, 0, 6, 0, 0}
```

```
In[*]:= Max[IntegerDigits[2 ^ 20]]
```

```
Out[*]:= 8
```

```
In[*]:= Count[IntegerDigits[2 ^ 1000], 0]
```

```
Out[*]:= 28
```

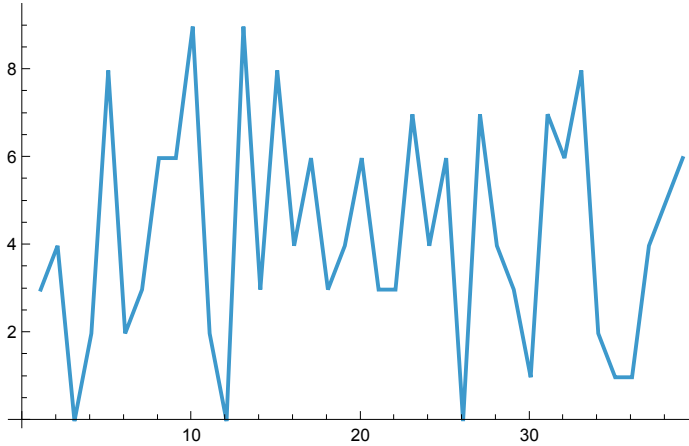
```
In[ ]:= Part[Sort[IntegerDigits[2^20]], 2]
```

```
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}
```

```
In[ ]:= 3 * Range[10]
```

```
Out[ ]:=
```

```
{3, 6, 9, 12, 15, 18, 21, 24, 27, 30}
```

```
In[ ]:= Times[Range[10], Range[10]]
```

```
Out[ ]:=
```

```
{1, 4, 9, 16, 25, 36, 49, 64, 81, 100}
```

```
In[ ]:= Last[IntegerDigits[2^37]]
```

```
Out[ ]:=
```

```
2
```

```
In[ ]:= First[Drop[IntegerDigits[2^32], Length[IntegerDigits[2^32]] - 2]]
```

```
Out[ ]:=
```

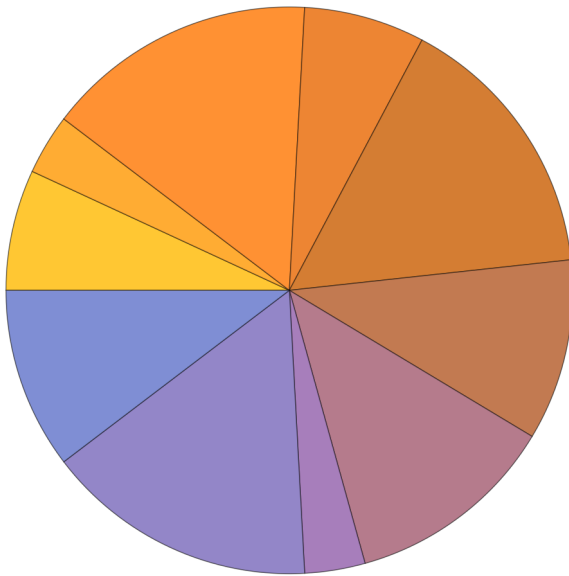
```
9
```

```
In[ ]:= Total[IntegerDigits[3^126]]
```

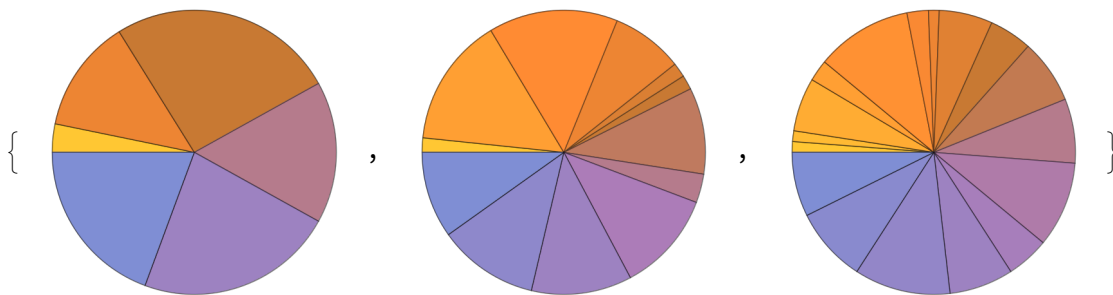
```
Out[ ]:=
```

```
234
```

```
In[ ]:= PieChart[IntegerDigits[2^32]]
Out[ ]:=
```



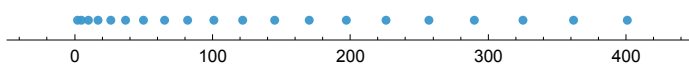
```
In[ ]:= List[PieChart[IntegerDigits[2^20]],
  PieChart[IntegerDigits[2^40]], PieChart[IntegerDigits[2^60]]]
Out[ ]:=
```



```
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[Range[20]^2]
Out[ ]:=
```



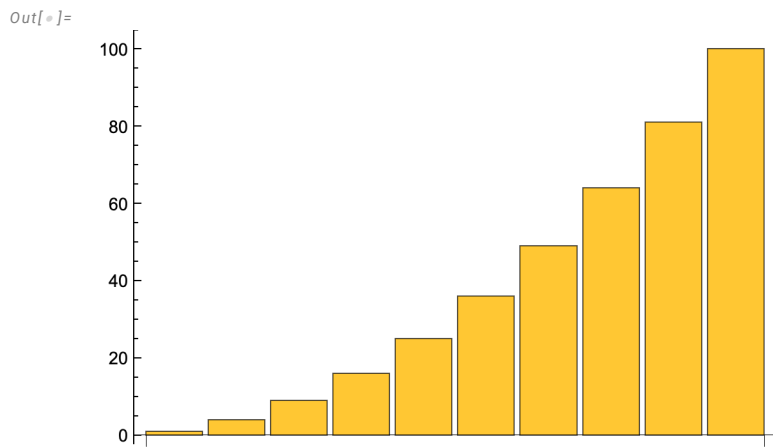
```
In[ ]:= Range[0, 20, 2]
```

```
Out[ ]:= {0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20}
```

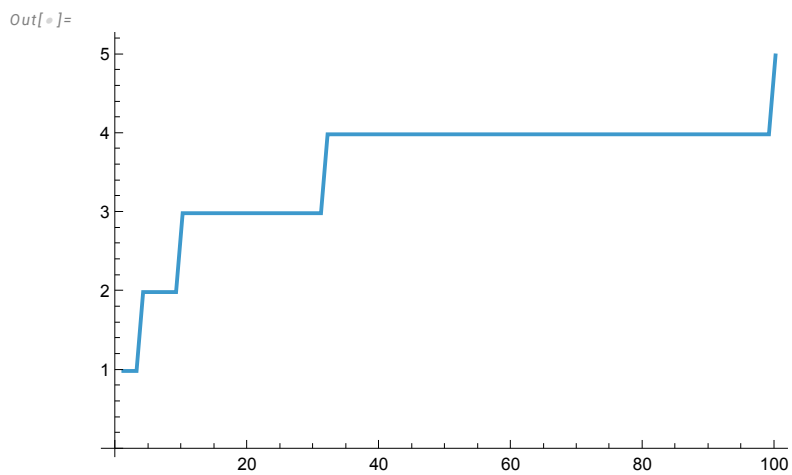
```
In[ ]:= Table[n, {n, 10}]
```

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

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



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

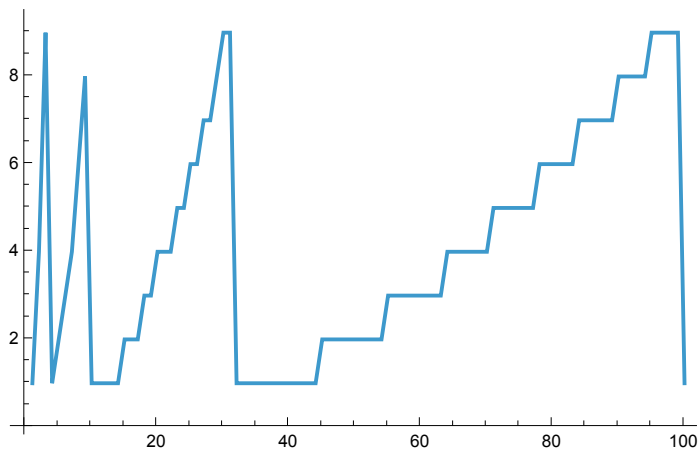


```
In[ ]:= Table[First[IntegerDigits[n^2]], {n, 20}]
```

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

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

```
Out[ ]:=
```



```
In[ ]:= Table[n^3 - n^2, {n, 10}]
```

```
Out[ ]:=
```

```
{0, 4, 18, 48, 100, 180, 294, 448, 648, 900}
```

```
In[ ]:= Range[1, 100, 2]
```

```
Out[ ]:=
```

```
{1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31,
 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57, 59, 61, 63, 65,
 67, 69, 71, 73, 75, 77, 79, 81, 83, 85, 87, 89, 91, 93, 95, 97, 99}
```

```
In[ ]:= Range[0, 100, 2]^2
```

```
Out[ ]:=
```

```
{0, 4, 16, 36, 64, 100, 144, 196, 256, 324, 400, 484, 576, 676, 784,
 900, 1024, 1156, 1296, 1444, 1600, 1764, 1936, 2116, 2304, 2500, 2704,
 2916, 3136, 3364, 3600, 3844, 4096, 4356, 4624, 4900, 5184, 5476, 5776,
 6084, 6400, 6724, 7056, 7396, 7744, 8100, 8464, 8836, 9216, 9604, 10000}
```

```
In[ ]:= Range[-3, 3]
```

```
Out[ ]:=
```

```
{-3, -2, -1, 0, 1, 2, 3}
```

```
In[ ]:= Column[Range[20], Range[20]^2, Range[20^3]]
```

```
Out[ ]=
```

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

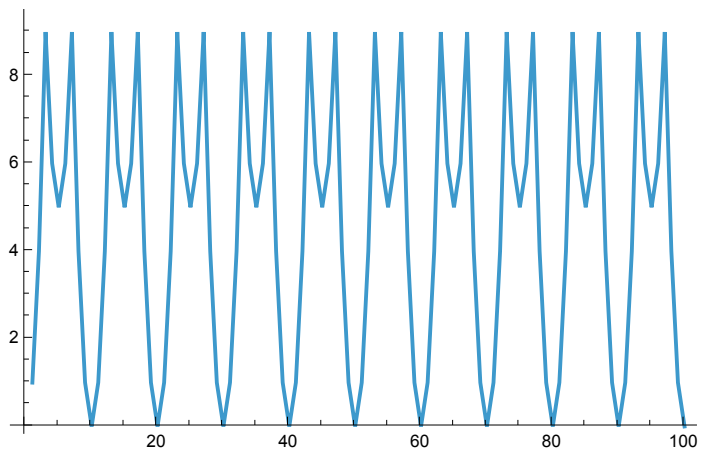
```
In[•]:= Table[Column[Range[20]^n], {n, 3}]
```

Out[•]=

1	1	1
2	4	8
3	9	27
4	16	64
5	25	125
6	36	216
7	49	343
8	64	512
9	81	729
{ 10	100	1000}
11 ,	121 ,	1331 }
12	144	1728
13	169	2197
14	196	2744
15	225	3375
16	256	4096
17	289	4913
18	324	5832
19	361	6859
20	400	8000

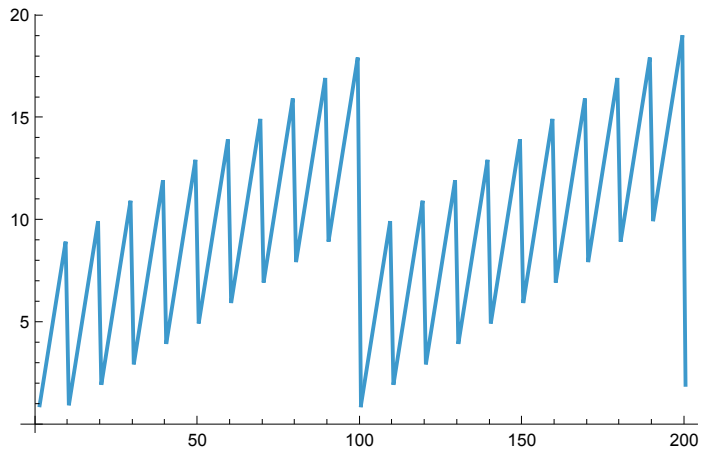
```
In[*]:= ListLinePlot[Table[Last[IntegerDigits[n^2]], {n, 100}]]
```

Out[•]=



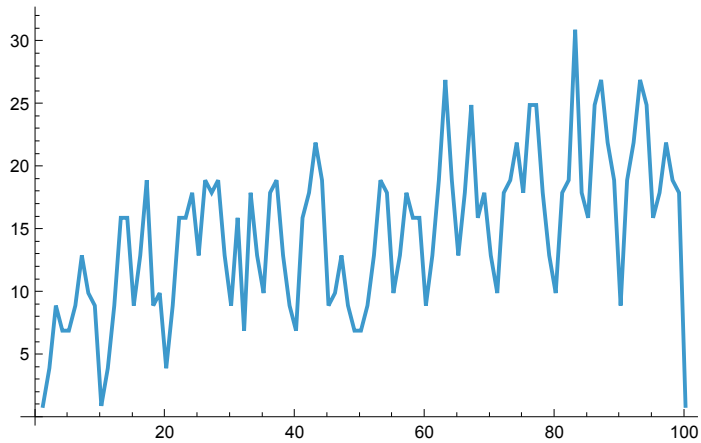
```
In[ ]:= ListLinePlot[Table[Total[IntegerDigits[n]], {n, 200}]]
```

```
Out[ ]:=
```



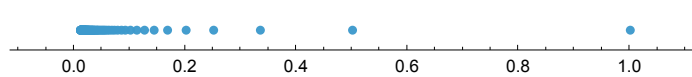
```
In[ ]:= ListLinePlot[Table[Total[IntegerDigits[n^2]], {n, 100}]]
```

```
Out[ ]:=
```



```
In[ ]:= NumberLinePlot[Table[1/n, {n, 100}]]
```

```
Out[ ]:=
```



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

```
Out[ ]:=
```

```
{Red, Yellow, Green}
```

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

```
Out[ ]:=
```

```
Column[{Red, Yellow, Green}]
```

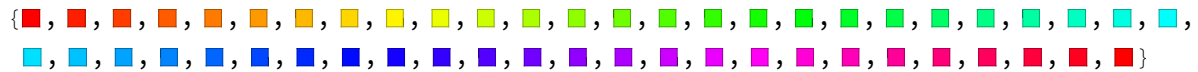
```
In[ ]:= ColorNegate[Orange]
```

```
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[*]:= Style[Swatch, 100, Purple] (*sort of a pun*)
```

```
Out[*]=
```

Swatch


```
In[*]:= Red[100]
```

```
Out[*]=
```

```
 [100]
```

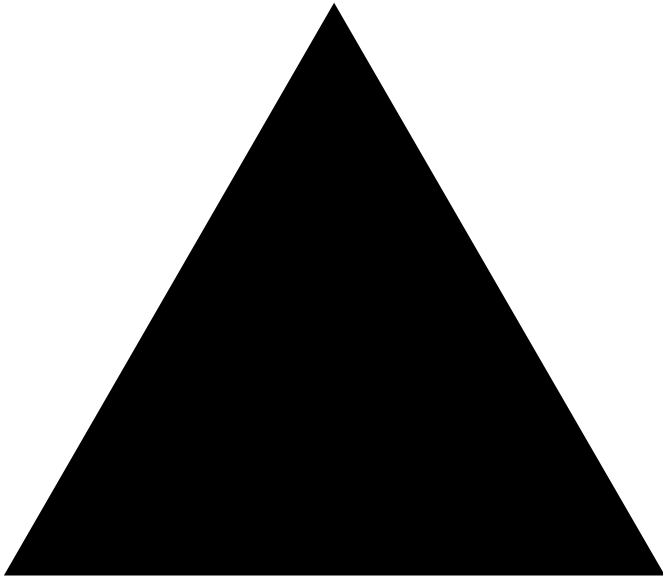
```
In[*]:= Table[Style[n^2, n^2], {n, 10}]
```

```
Out[*]=
```

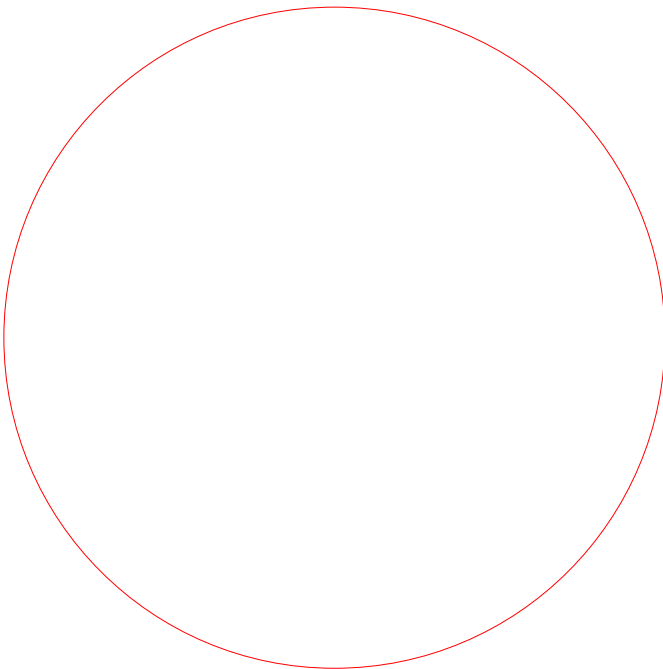
```
{
```

```
In[*]:=
```

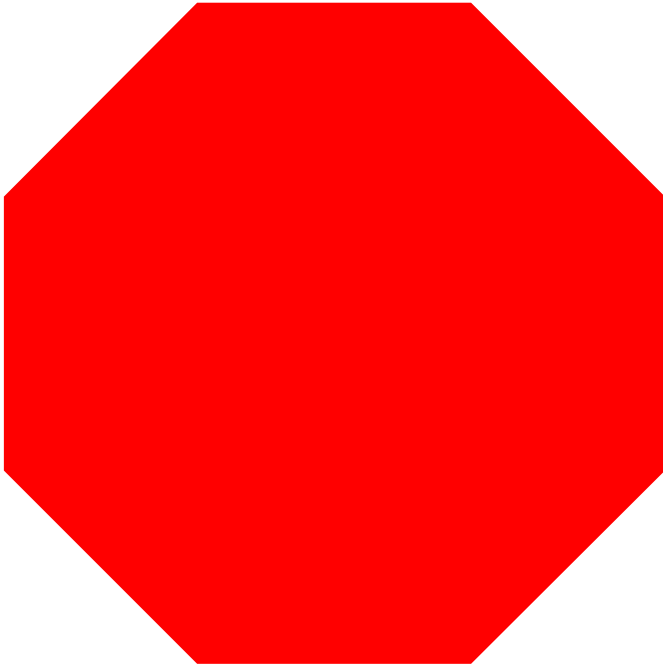
```
In[ ]:= Graphics[RegularPolygon[3]]  
Out[ ]:=
```



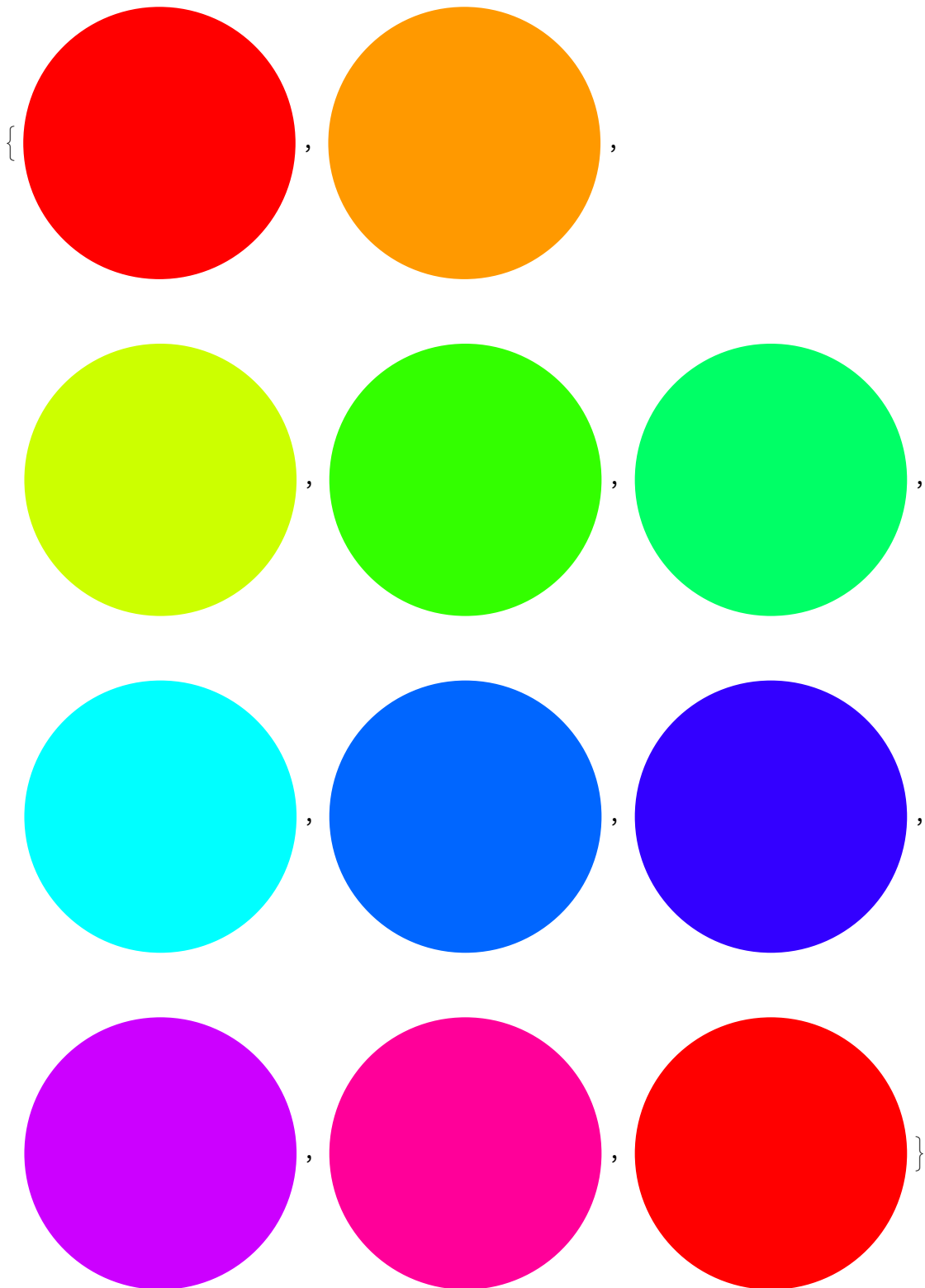
```
In[ ]:= Graphics[Style[Circle[], Red]]  
Out[ ]:=
```



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

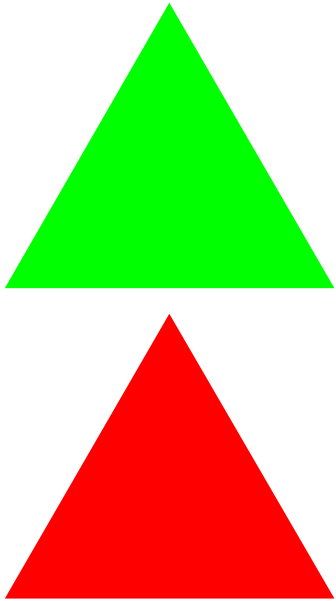


```
In[ ]:= Table[Graphics[Style[Disk[], Hue[n]]], {n, 0, 1, 0.1}]  
Out[ ]:=
```



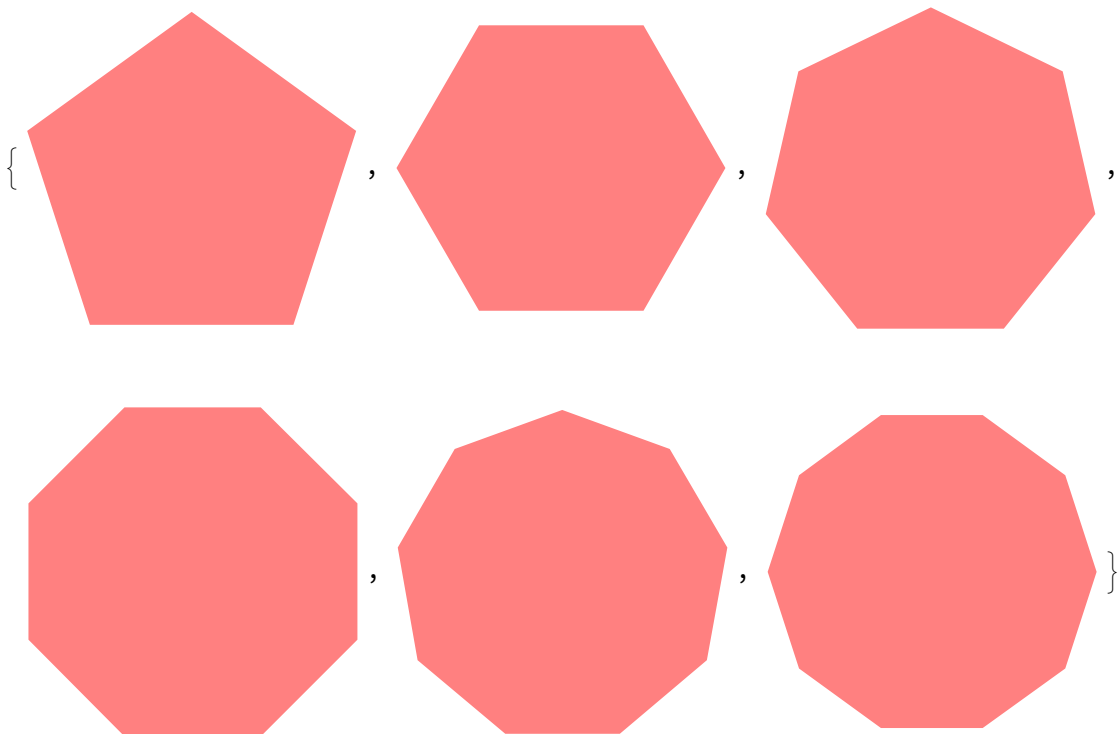
```
In[ ]:= Column[{Graphics[Style[RegularPolygon[3], Green]],  
               Graphics[Style[RegularPolygon[3], Red]]}]
```

Out[]=

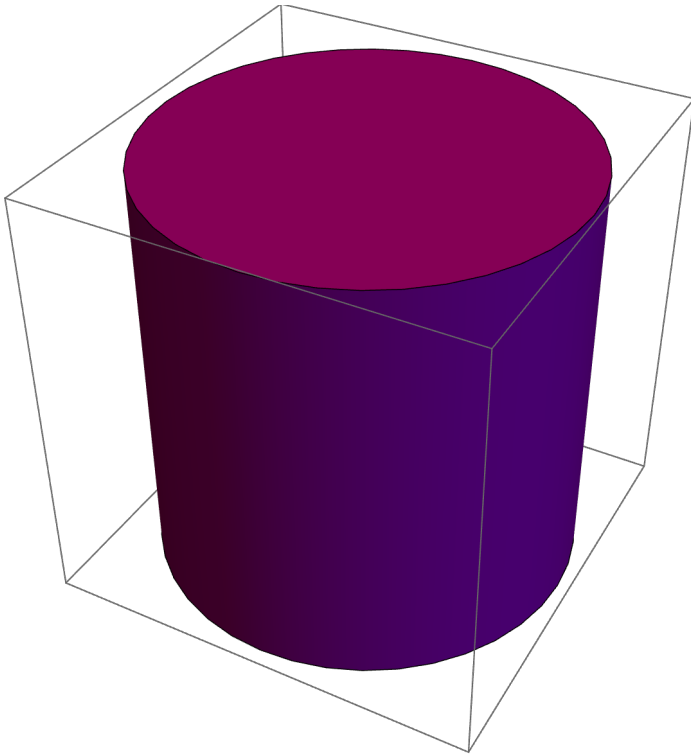


```
In[ ]:= Table[Graphics[Style[RegularPolygon[n], Pink]], {n, 5, 10}]
```

Out[]=



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



```
In[ ]:= (*Make a list of polygons with 8, 7, 6, ..., 3 sides,
and colored with RandomColor, then show them all overlaid
with the triangle on top (hint: apply Graphics to the list).
```

... **Syntax:** "Table[" cannot be followed by "[RegularPolygon[n]], {n, 3, 8}]".

```
In[ ]:=
```

```
In[ ]:=
```