Eli Lerner PSet 2

In[122]:=

```
{Reverse[Range[10]]}^2
```

Out[122]=

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

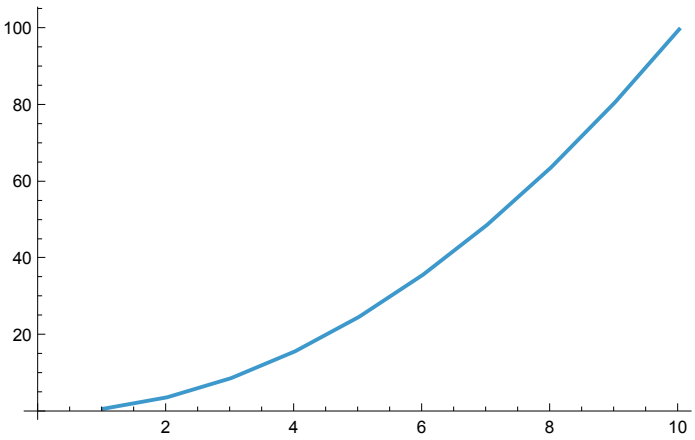
In[123]:=

```
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[123]=

```
385
```

Out[124]=



Out[125]=

```
{1, 1, 2, 2, 3, 3, 4, 4}
```

Out[126]=

```
39
```

Out[127]=

```
4
```

Out[128]=

```
{1, 2, 6, 7, 6, 5, 0, 6, 0, 0}
```

In[129]:=

```
Max[IntegerDigits[2^20]]
```

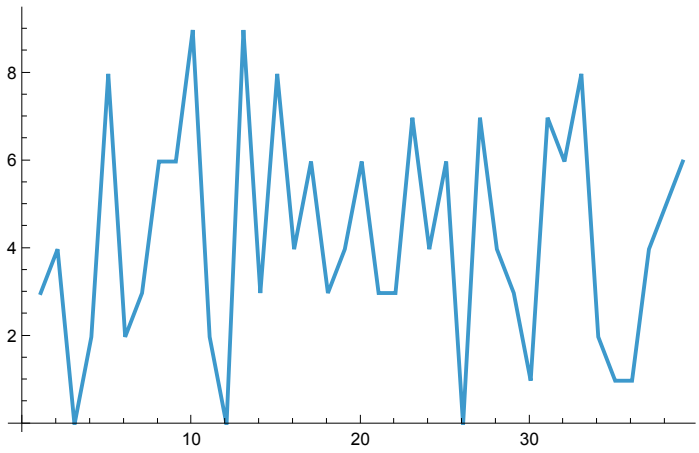
Out[129]=

```
8
```

In[130]:=
```
Count[IntegerDigits[2^1000], 0]
```
Out[130]=
```
28
```

In[131]:=
```
Part[Sort[IntegerDigits[2^20]], 2]
```
Out[131]=
```
1
```

In[132]:=
```
ListLinePlot[IntegerDigits[2^128]]
```
Out[132]=



In[133]:=
```
Drop[Take[Range[100], 20], 10]
```
Out[133]=
```
{11, 12, 13, 14, 15, 16, 17, 18, 19, 20}
```

In[134]:=
```
3 * Range[10]
```
Out[134]=
```
{3, 6, 9, 12, 15, 18, 21, 24, 27, 30}
```

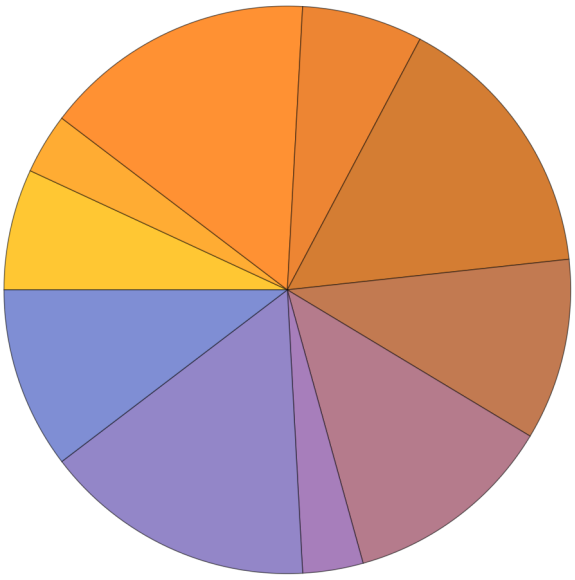
In[135]:=
```
Times[Range[10], Range[10]]
```
Out[135]=
```
{1, 4, 9, 16, 25, 36, 49, 64, 81, 100}
```

In[136]:=
```
Last[IntegerDigits[2^37]]
```
Out[136]=
```
2
```

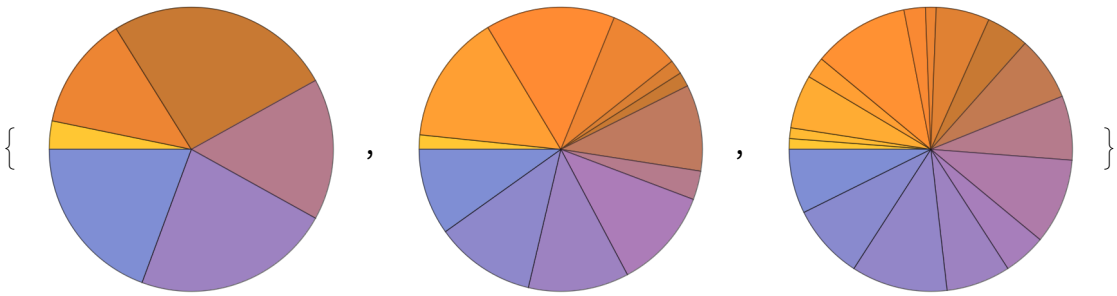
In[137]:=
```
First[Drop[IntegerDigits[2^32], Length[IntegerDigits[2^32]] - 2]]
```
Out[137]=
```
9
```

In[138]:=
```
Total[IntegerDigits[3^126]]
```
Out[138]=
```
234
```

In[139]:=
```
PieChart[IntegerDigits[2^32]]
```
Out[139]=



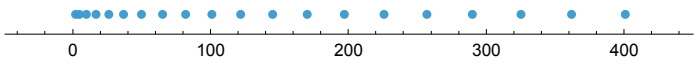
In[140]:=
```
List[PieChart[IntegerDigits[2^20]],
 PieChart[IntegerDigits[2^40]], PieChart[IntegerDigits[2^60]]]
```
Out[140]=



In[141]:=
```
Table[1000, 5]
```
Out[141]=
```
{1000, 1000, 1000, 1000, 1000}
```

In[142]:=
```
Table[n^3, {n, 10, 20}]
```
Out[142]=
```
{1000, 1331, 1728, 2197, 2744, 3375, 4096, 4913, 5832, 6859, 8000}
```

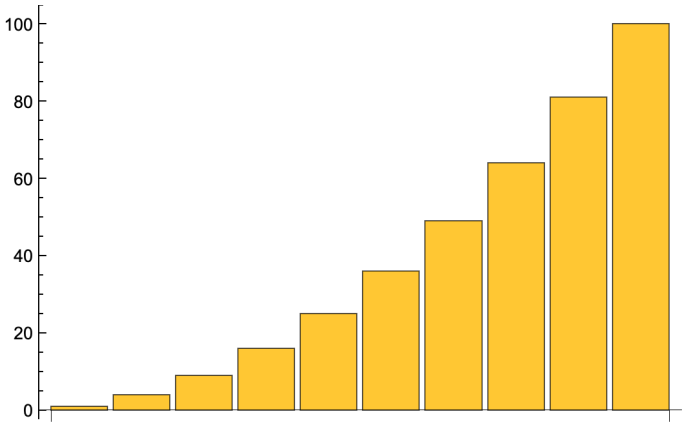
In[143]:=
```
NumberLinePlot[Range[20]^2]
```
Out[143]=



In[144]:=
```
Range[0, 20, 2]
```
Out[144]=
```
{0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20}
```

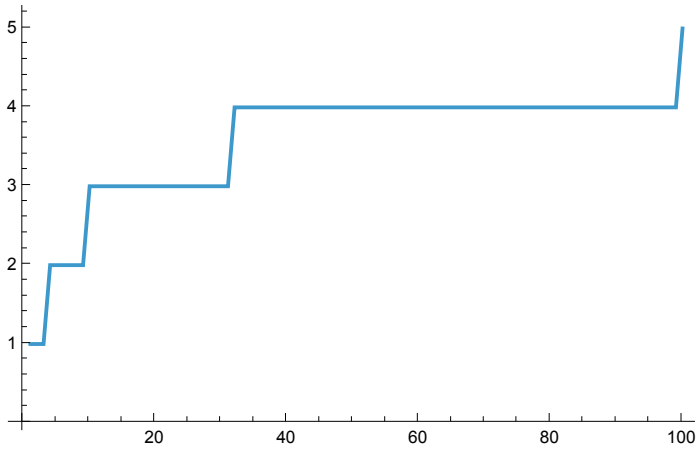
In[145]:=
```
Table[n, {n, 10}]
```
Out[145]=
```
{1, 2, 3, 4, 5, 6, 7, 8, 9, 10}
```

In[146]:=
```
BarChart[Table[n^2, {n, 10}]]
```
Out[146]=



In[147]:=
```
ListLinePlot[Table[Length[IntegerDigits[n^2]], {n, 100}]]
```

Out[147]=

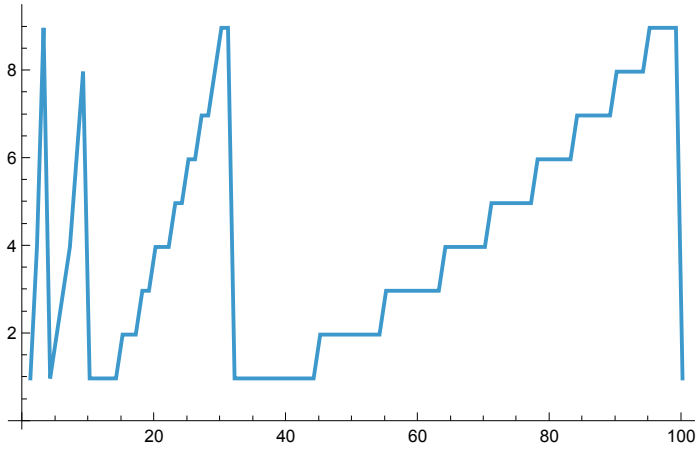


In[148]:=
```
Table[First[IntegerDigits[n^2]], {n, 20}]
```

Out[148]=
```
{1, 4, 9, 1, 2, 3, 4, 6, 8, 1, 1, 1, 1, 1, 2, 2, 2, 3, 3, 4}
```

In[149]:=
```
ListLinePlot[Table[First[IntegerDigits[n^2]], {n, 100}]]
```

Out[149]=



In[150]:=
```
Table[n^3 - n^2, {n, 10}]
```

Out[150]=
```
{0, 4, 18, 48, 100, 180, 294, 448, 648, 900}
```

In[151]:=
```
Range[1, 100, 2]
```

Out[151]=
```
{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[152]:=
```
Range[0, 100, 2]^2
```
Out[152]=
```
{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, 10 000}
```

In[153]:=
```
Range[-3, 3]
```
Out[153]=
```
{-3, -2, -1, 0, 1, 2, 3}
```

In[154]:=
```
Column[Range[20], Range[20]^2, Range[20^3]]
```

Out[154]=
```
1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20
```

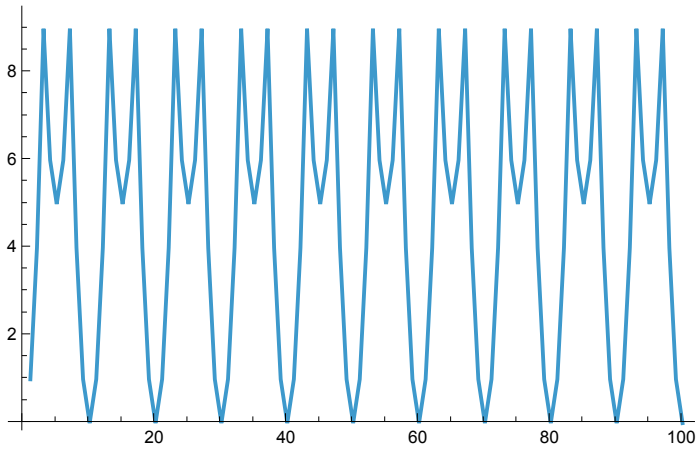
In[155]:=
```
Table[Column[Range[20]^n], {n, 3}]
```

Out[155]=

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

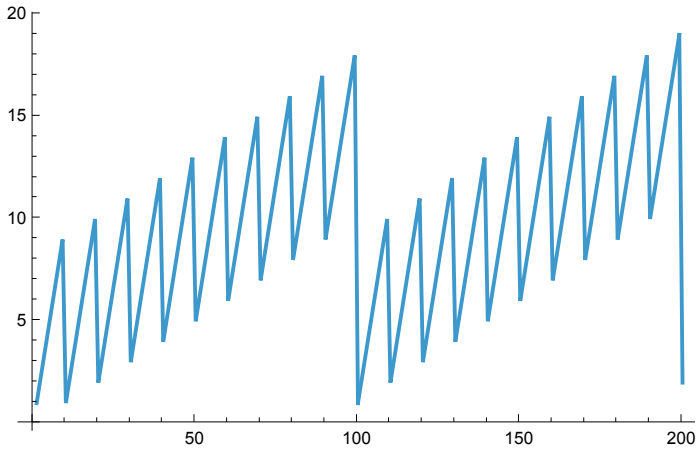
In[156]:=
```
ListLinePlot[Table[Last[IntegerDigits[n^2]], {n, 100}]]
```

Out[156]=



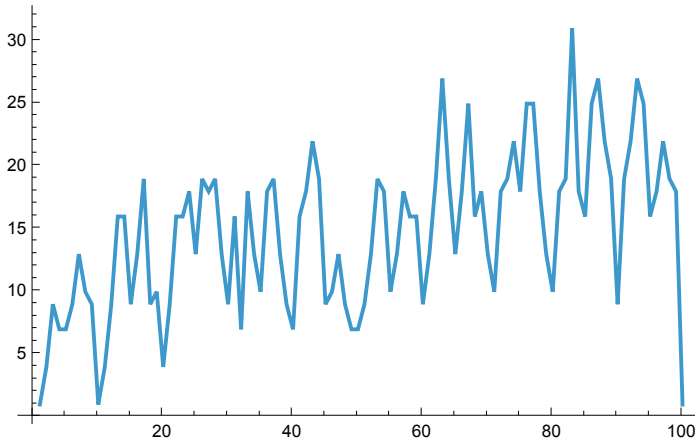
In[157]:=
```
ListLinePlot[Table[Total[IntegerDigits[n]], {n, 200}]]
```

Out[157]=



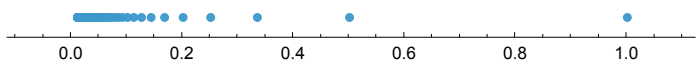
In[158]:=
```
ListLinePlot[Table[Total[IntegerDigits[n^2]], {n, 100}]]
```

Out[158]=



In[159]:=
```
NumberLinePlot[Table[1 / n, {n, 100}]]
```

Out[159]=



In[160]:=
```
{Red, Yellow, Green}
```

Out[160]=

{■, ■, ■}

In[161]:=
```
Columnn[{Red, Yellow, Green}]
```

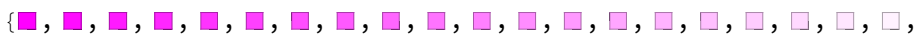
Out[161]=

Columnn[{■, ■, ■}]

In[162]:=
```
ColorNegate[Orange]
```
Out[162]=

In[163]:=
```
Table[Hue[n], {n, 0, 1, 0.02}]
```
Out[163]=

In[164]:=
```
Table[RGBColor[1, n, 1], {n, 0, 1, 0.05}]
```
Out[164]=



In[165]:=
```
Blend[{Pink, Yellow}]
```
Out[165]=

In[166]:=
```
Table[Blend[{Yellow, Hue[n]}], {n, 0, 1, 0.05}]
```
Out[166]=

In[167]:=
```
Style[Swatch, 100, Purple] (*sort of a pun*)
```
Out[167]=

Swatch

In[168]:=
```
Red[100]
```
Out[168]=

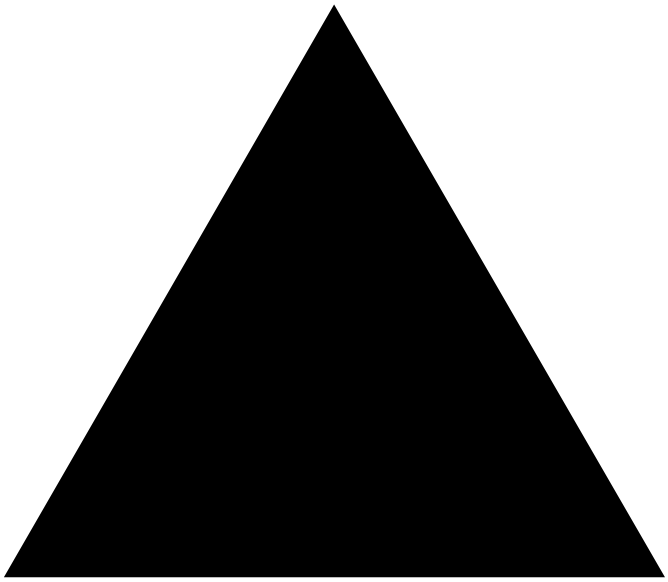
RGBColor[100]

In[169]:=
```
Table[Style[n^2, n^2], {n, 10}]
```
Out[169]=

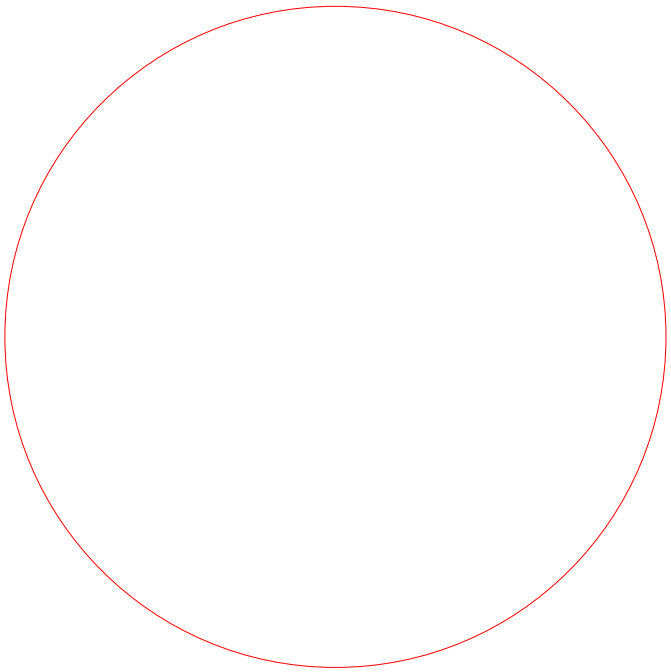
1 4 9 16 25 36 49 64 81 100

In[170]:=

In[171]:=
```
Graphics[RegularPolygon[3]]
```
Out[171]=

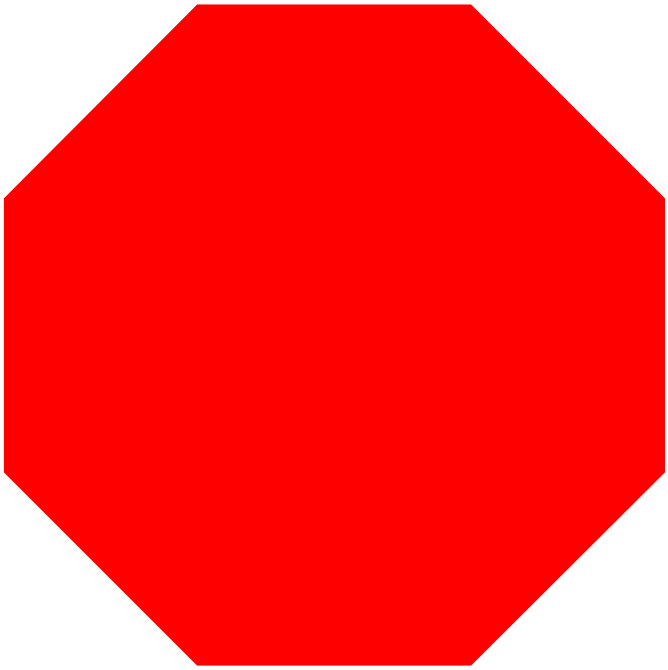


In[172]:=
```
Graphics[Style[Circle[], Red]]
```
Out[172]=



In[173]:=
```
Graphics[Style[RegularPolygon[8], Red]]
```

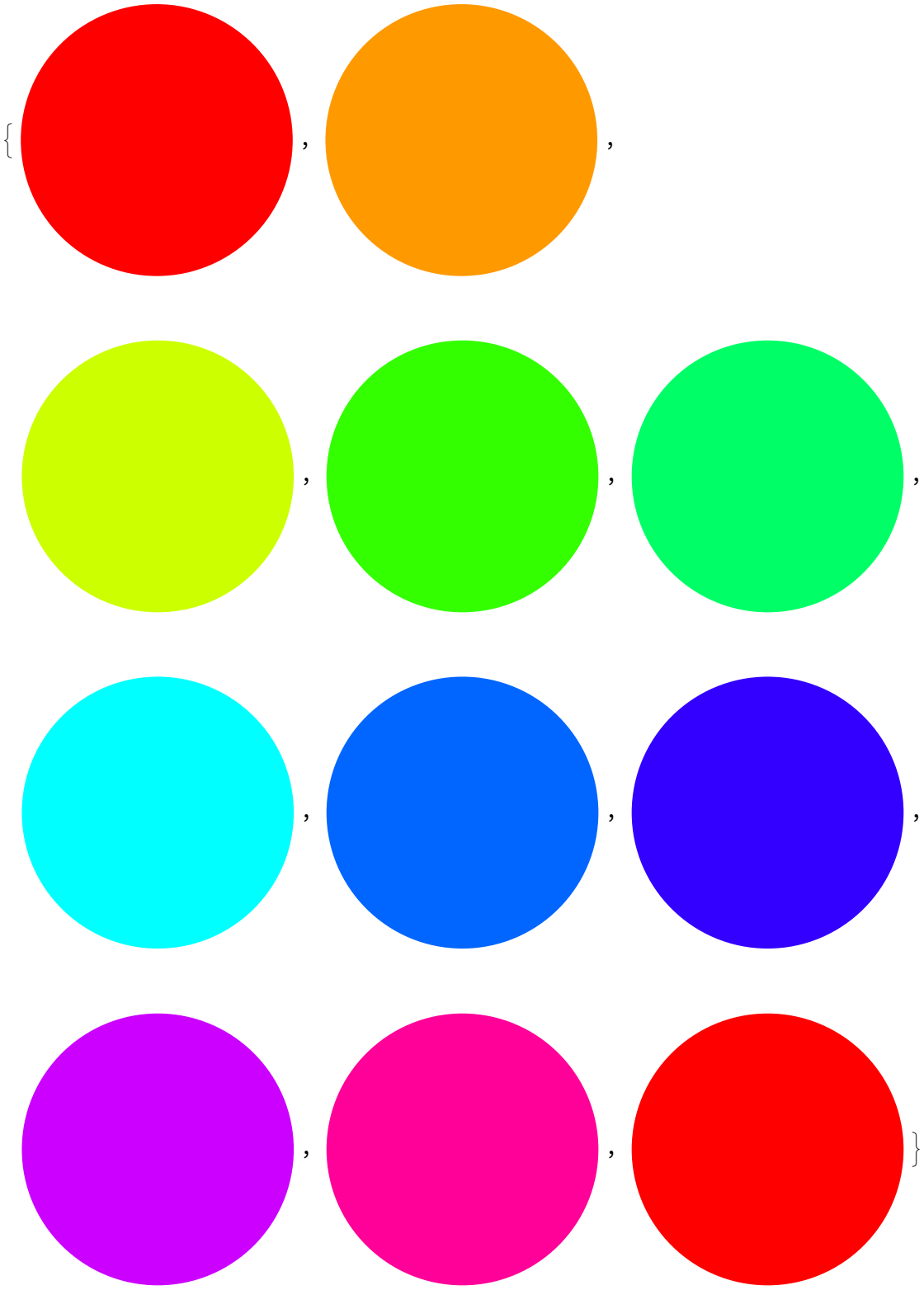
Out[173]=



In[174]:=

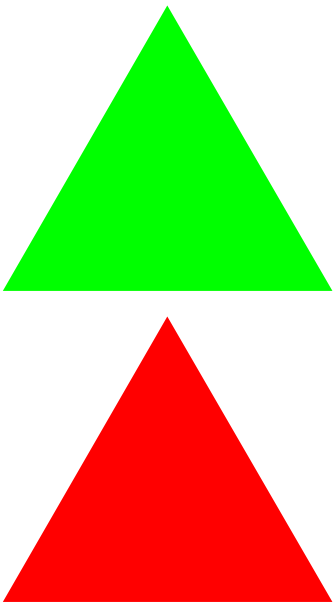
```
Table[Graphics[Style[Disk[], Hue[n]]], {n, 0, 1, 0.1}]
```

Out[174]=



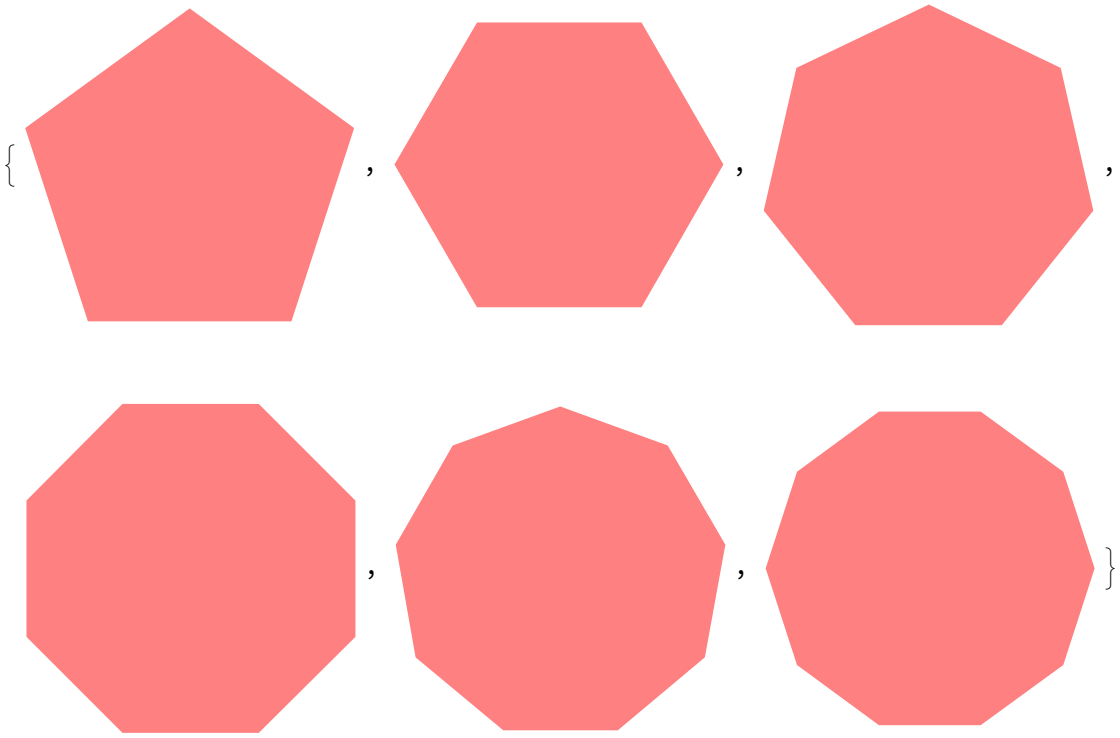
In[175]:=
```
Column[{Graphics[Style[RegularPolygon[3], Green]],
  Graphics[Style[RegularPolygon[3], Red]]}]
```

Out[175]=



In[176]:=
```
Table[Graphics[Style[RegularPolygon[n], Pink]], {n, 5, 10}]
```

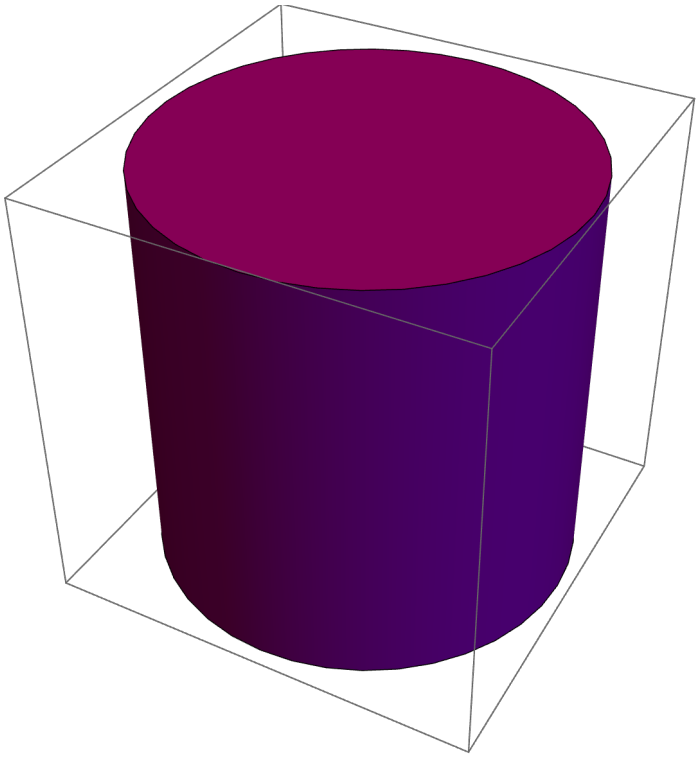
Out[176]=



In[177]:=

```
Graphics3D[Style[Cylinder[], Purple]]
```

Out[177]=



In[178]:=

```
(*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[178]:=

In[179]:=