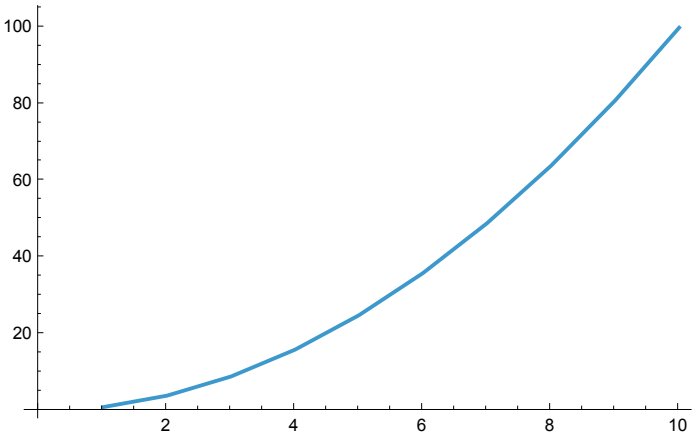
Eli Lerner PSet 2

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[•]=



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
```

Looks good.

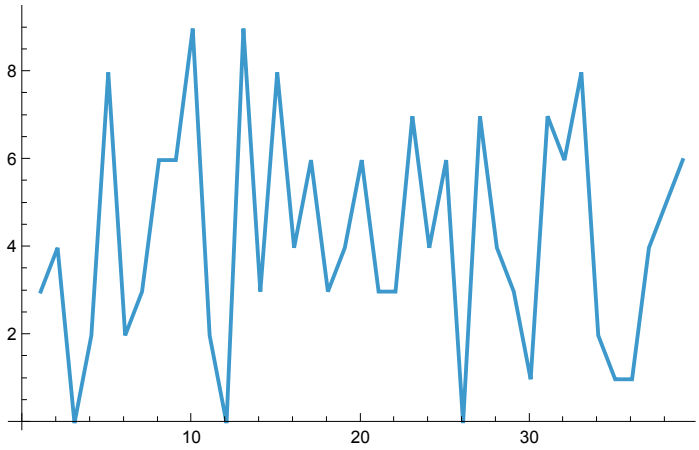
Please do one exercise per cell.
It makes it easier for me to compare with my solution.

See comments on pp. 6, 8, and 14.

9/10

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}
```

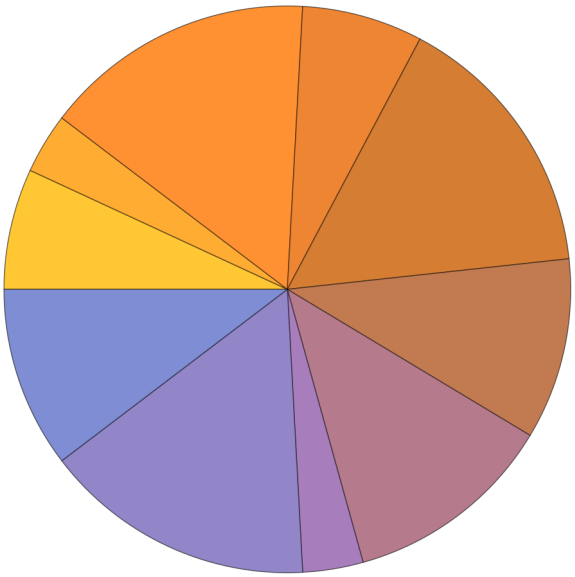
In[•]:=
```
Last[IntegerDigits[2^37]]
```
Out[•]=
```
2
```

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

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

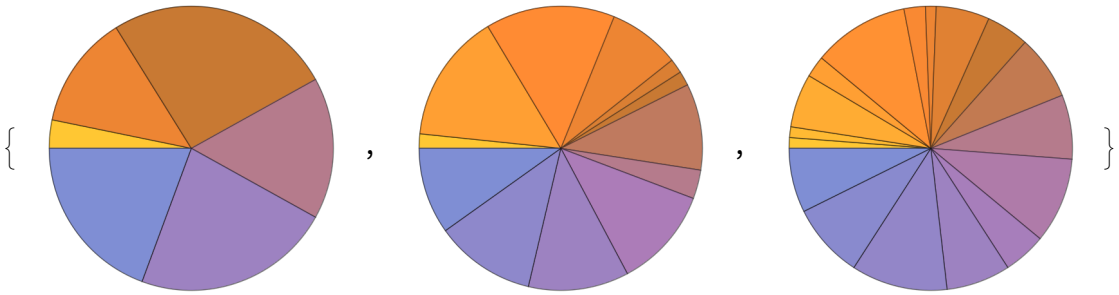
In[•]:=
```
PieChart[IntegerDigits[2^32]]
```

Out[•]=



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

Out[•]=



In[•]:=
```
Table[1000, 5]
```

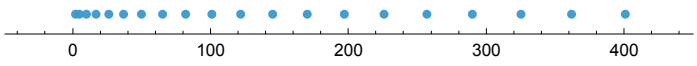
Out[•]=
```
{1000, 1000, 1000, 1000, 1000}
```

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]
```

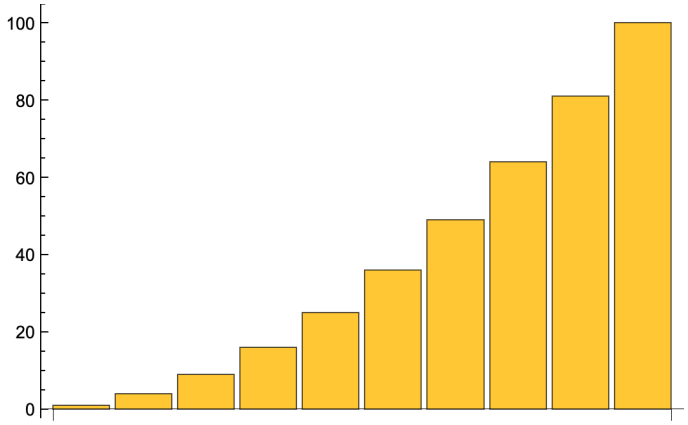
Out[•]=
```
{0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20}
```

In[•]:=
```
Table[n, {n, 10}]
```

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

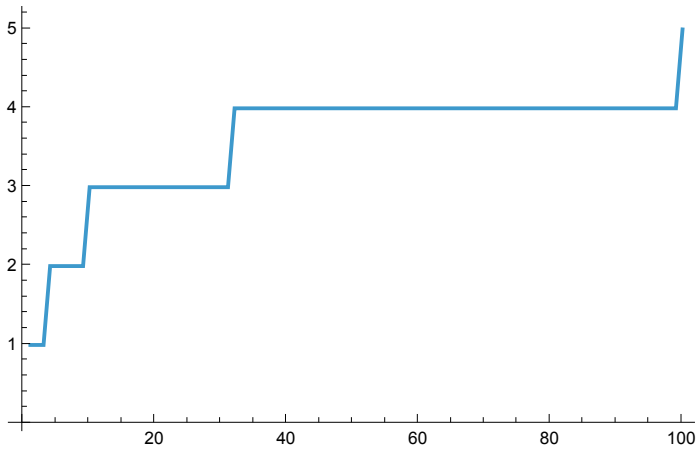
In[•]:=
```
BarChart[Table[n^2, {n, 10}]]
```

Out[•]=



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

Out[•]=

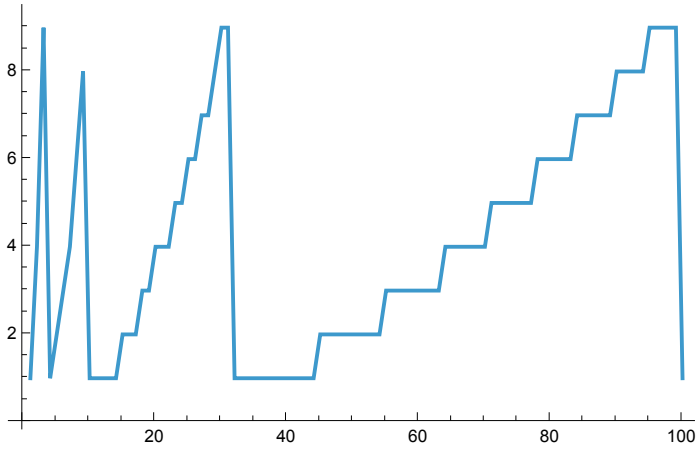


In[•]:=
```
Table[First[IntegerDigits[n^2]], {n, 20}]
```

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, 10 000}
```

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
```

I think Column doesn't know what to do with the second and third arguments. Probably you meant Column[{Range[20], Range[20] ^2, Range[20^3]}]

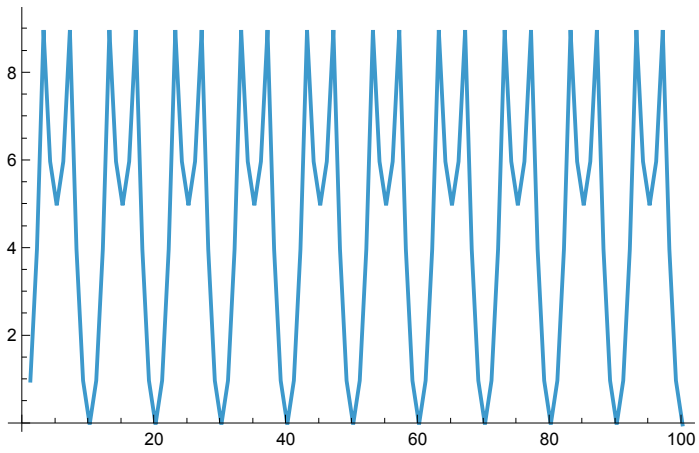
In[•]:=
```
Table[Column[Range[20]^n], {n, 3}]
```

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

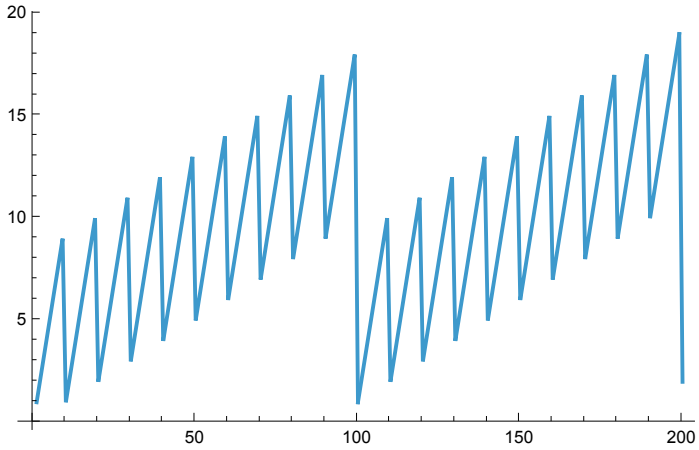
In[•]:=
```
ListLinePlot[Table[Last[IntegerDigits[n^2]], {n, 100}]]
```

Out[•]=



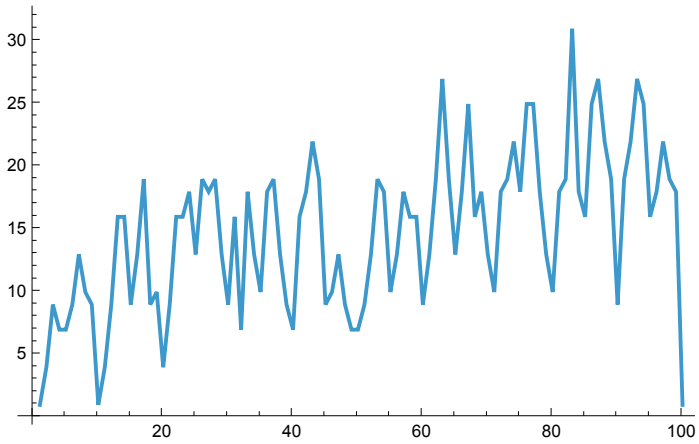
In[•]:=
```
ListLinePlot[Table[Total[IntegerDigits[n]], {n, 200}]]
```

Out[•]=



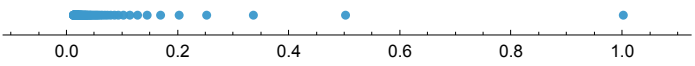
In[•]:=
```
ListLinePlot[Table[Total[IntegerDigits[n^2]], {n, 100}]]
```

Out[•]=



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

Out[•]=



In[•]:=
```
{Red, Yellow, Green}
```

Out[•]=

{■, ■, ■}

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

Out[•]=

Columnn[{■, ■, ■}]

Oops — Missspelled Columnnn

In[•]:=
```
ColorNegate[Orange]
```

Out[•]=

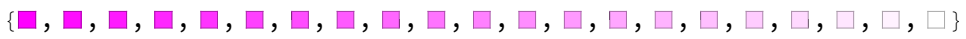
■

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

Out[ ]=

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

Out[ ]=

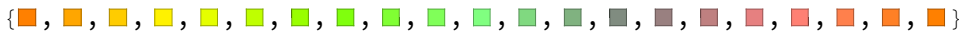


In[ ]:=
```
Blend[{Pink, Yellow}]
```

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[ ]=

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

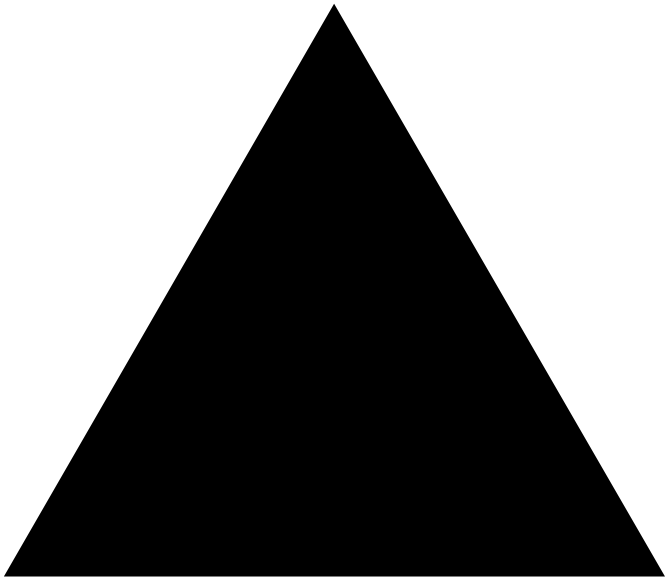
Out[ ]=

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

In[ ]:=

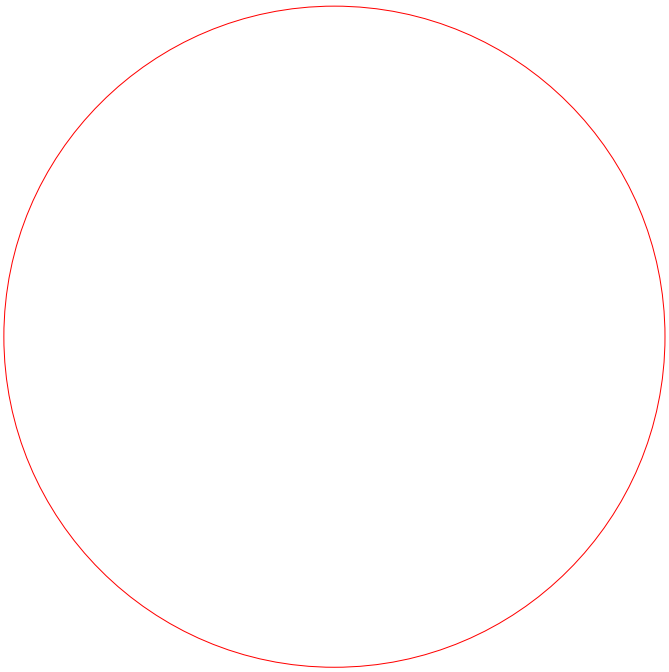
In[•]:=
```
Graphics[RegularPolygon[3]]
```

Out[•]=



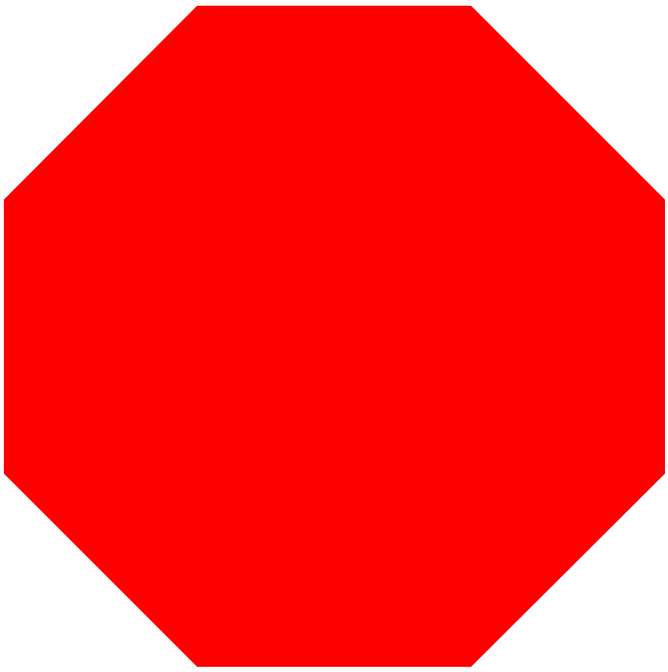
In[•]:=
```
Graphics[Style[Circle[], Red]]
```

Out[•]=



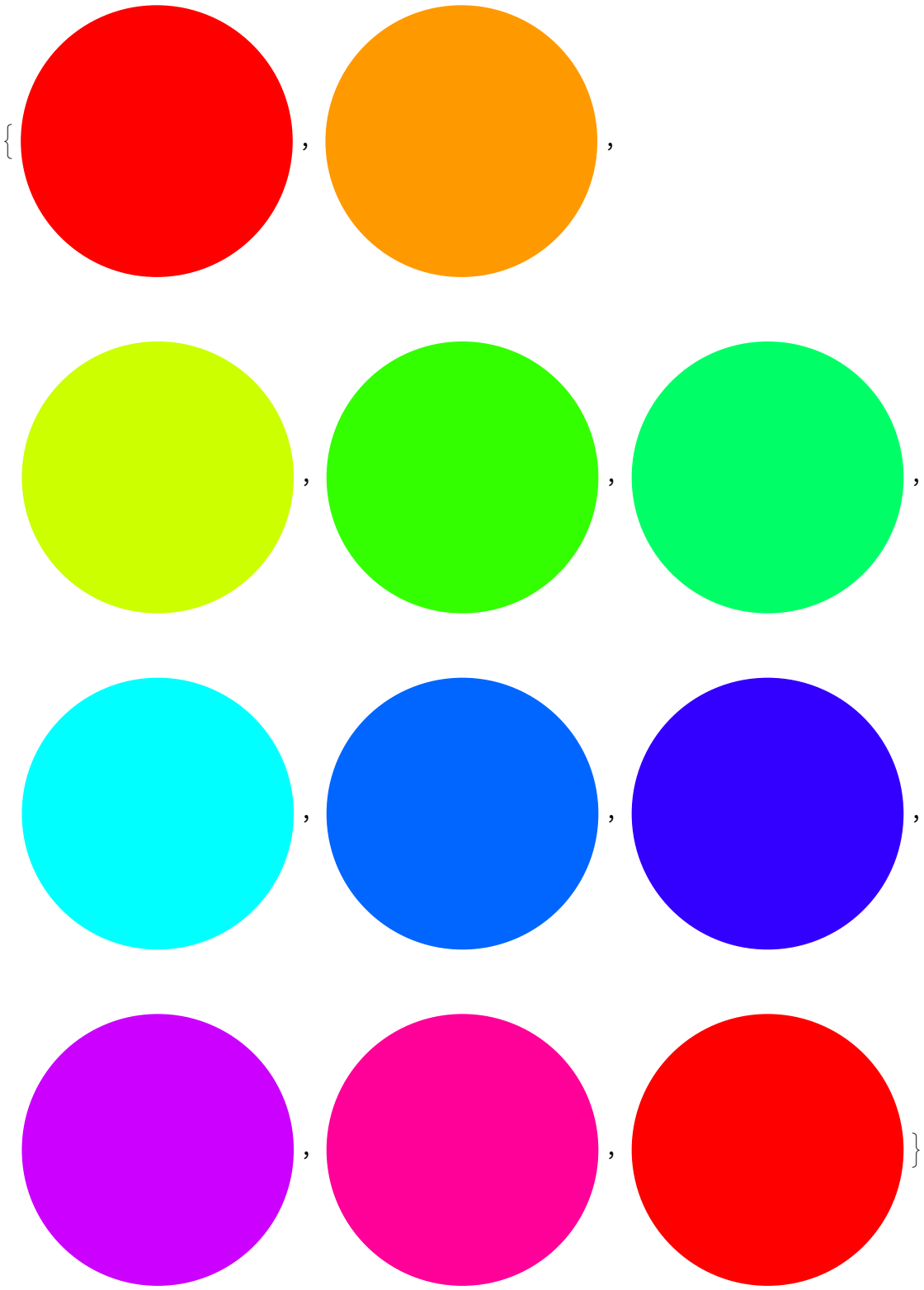
In[•]:=
```
Graphics[Style[RegularPolygon[8], Red]]
```

Out[•]=



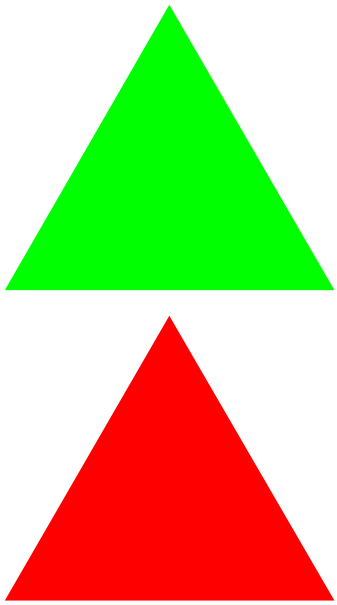
In[•]:=
```
Table[Graphics[Style[Disk[], Hue[n]]], {n, 0, 1, 0.1}]
```

Out[•]=



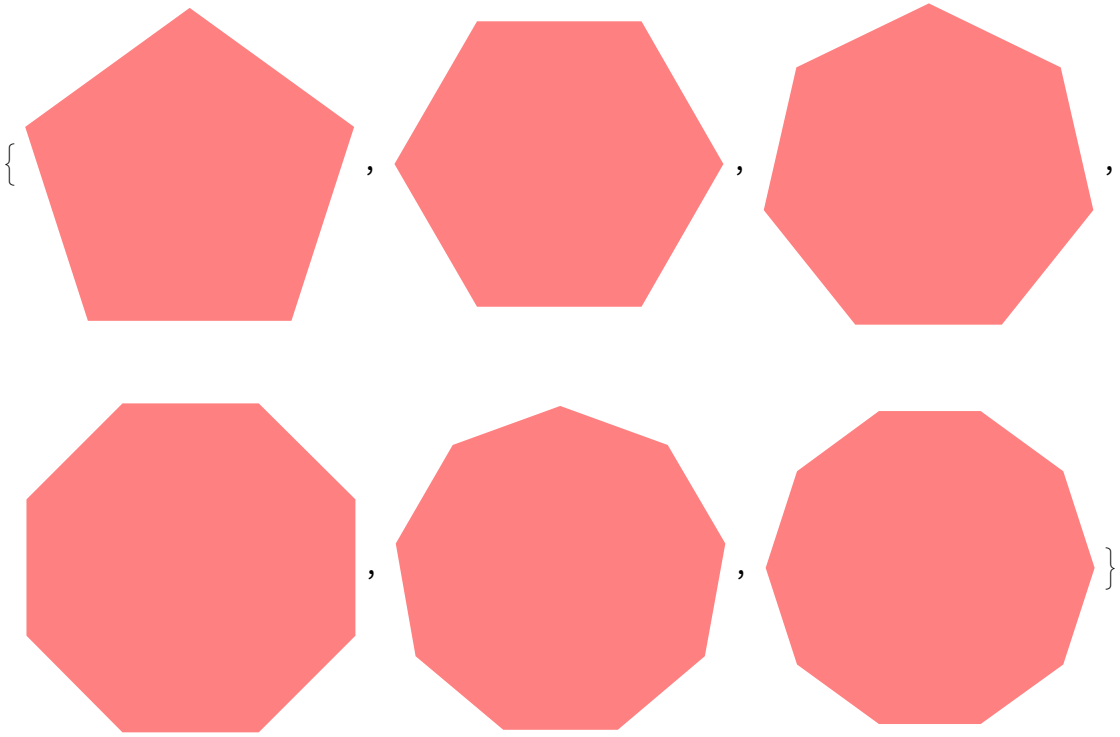
In[•]:=
```
Column[{Graphics[Style[RegularPolygon[3], Green]],
  Graphics[Style[RegularPolygon[3], Red]]}]
```

Out[•]=



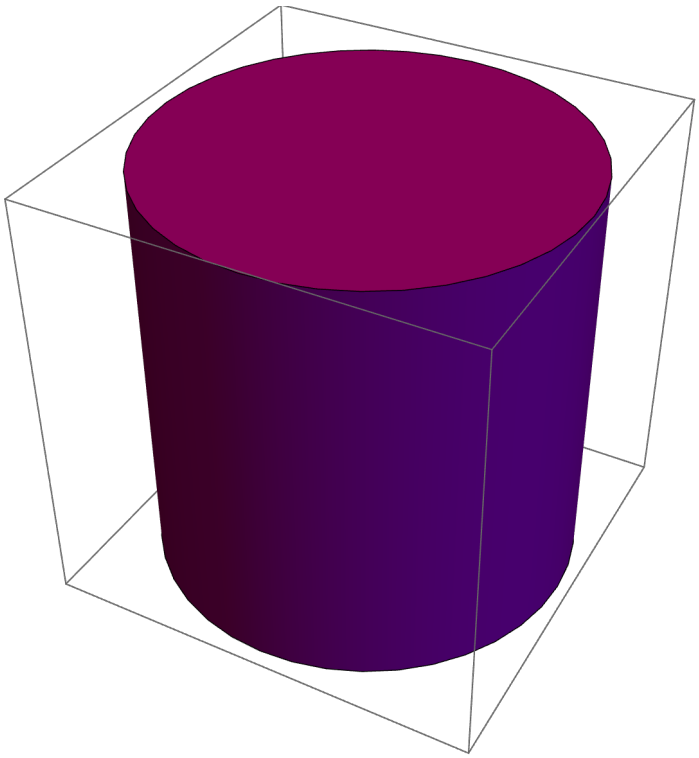
In[•]:=
```
Table[Graphics[Style[RegularPolygon[n], Pink]], {n, 5, 10}]
```

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[ ]:=

OOPS. Your final exercise does not execute!