
EIWL Problem Sets, Sections 5-8 - Harper Yonago

Section 5

In[278]:=

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

Out[278]=

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

In[279]:=

```
Total[Range[10]^2]
```

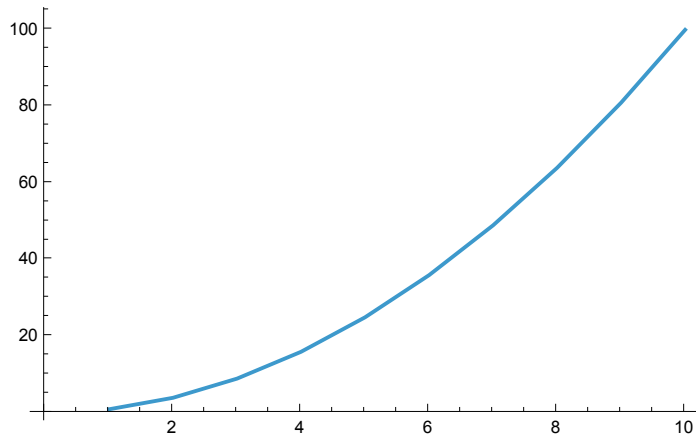
Out[279]=

```
385
```

In[280]:=

```
ListLinePlot[Range[10]^2]
```

Out[280]=



In[281]:=

```
Sort[Join[Range[4], Range[4]]]
```

Out[281]=

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

In[282]:=

```
Range[10, 15 + 5]
```

Out[282]=

```
{10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20}
```

In[283]:=

```
{10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20}  
(*Not sure if this was what the excersize intended,  
although it is technically correct*)
```

Out[283]=

```
{10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20}
```

```
In[284]:= Sort[Join[Range[5]^2, Range[5]^3]]
```

```
Out[284]= {1, 1, 4, 8, 9, 16, 25, 27, 64, 125}
```

```
In[285]:= Length[IntegerDigits[2^128]]
```

```
Out[285]= 39
```

```
In[286]:= First[IntegerDigits[2^32]]
```

```
Out[286]= 4
```

```
In[287]:= Take[IntegerDigits[2^100], 10]
```

```
Out[287]= {1, 2, 6, 7, 6, 5, 0, 6, 0, 0}
```

```
In[288]:= Max[IntegerDigits[2^20]]
```

```
Out[288]= 8
```

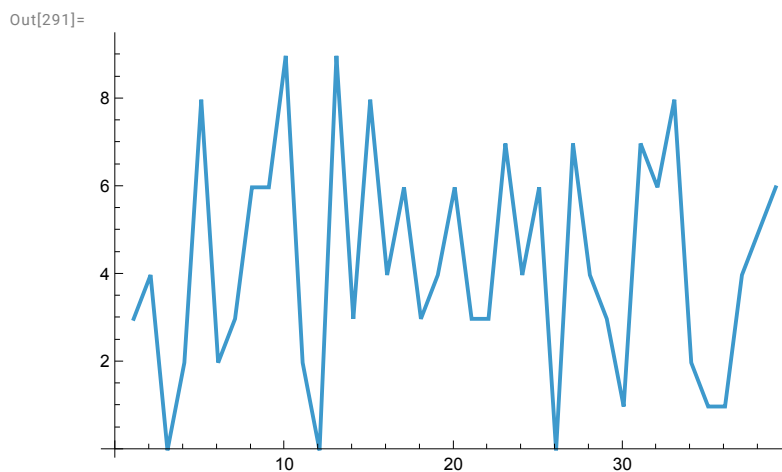
```
In[289]:= Count[IntegerDigits[2^1000], 0]
```

```
Out[289]= 28
```

```
In[290]:= Part[Sort[IntegerDigits[2^20]], 2]
```

```
Out[290]= 1
```

```
In[291]:= ListLinePlot[IntegerDigits[2^128]]
```



In[292]:=

Drop[Take[Range[100], 20], 10]

Out[292]=

{11, 12, 13, 14, 15, 16, 17, 18, 19, 20}

Section 6

In[293]:=

Table[1000, 5]

Out[293]=

{1000, 1000, 1000, 1000, 1000}

In[294]:=

Table[n^3, {n, 10, 20}]

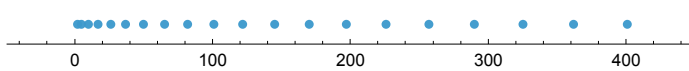
Out[294]=

{1000, 1331, 1728, 2197, 2744, 3375, 4096, 4913, 5832, 6859, 8000}

In[295]:=

NumberLinePlot[Range[20]^2]

Out[295]=



In[296]:=

Range[2, 20, 2]

Out[296]=

{2, 4, 6, 8, 10, 12, 14, 16, 18, 20}

In[297]:=

Table[n, {n, 10}]

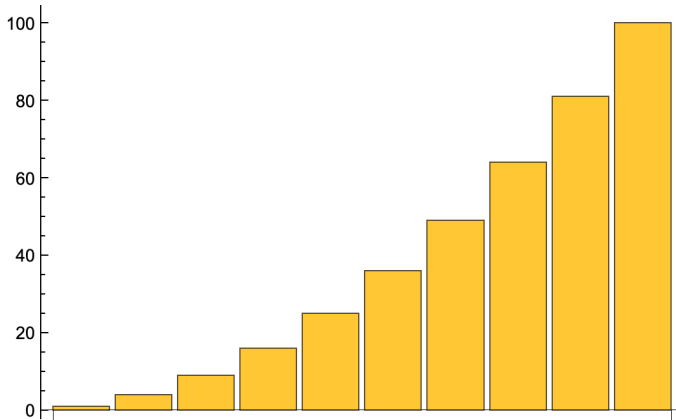
Out[297]=

{1, 2, 3, 4, 5, 6, 7, 8, 9, 10}

In[298]:=

BarChart[Range[10]^2]

Out[298]=



In[299]:=

IntegerDigits[Table[n^2, {2, 10}]]

Table: Raw object 2 cannot be used as an iterator. [i](#)

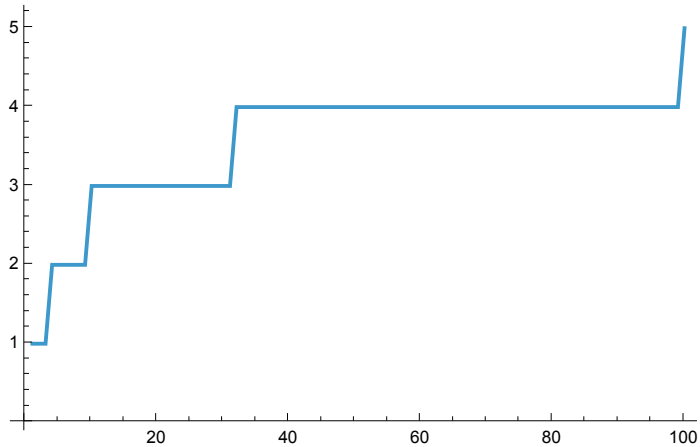
Out[299]=

IntegerDigits[Table[n^2, {2, 10}]]

In[300]:=

ListLinePlot[Table[Length[IntegerDigits[n^2]], {n, 100}]]

Out[300]=



In[301]:=

Table[First[IntegerDigits[n^2]], {n, 20}]

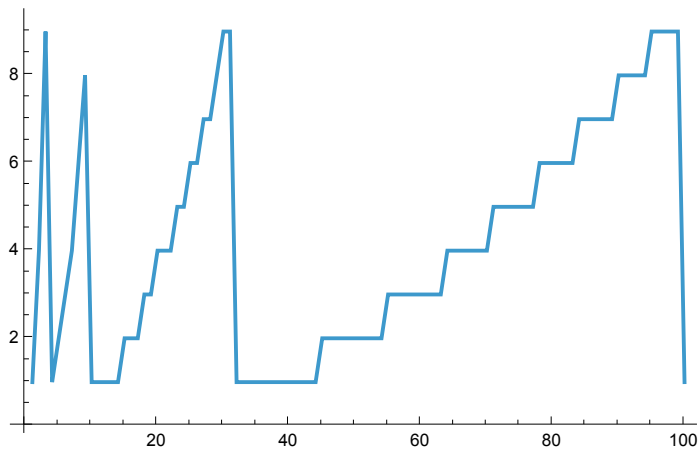
Out[301]=

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

In[302]:=

ListLinePlot[Table[First[IntegerDigits[n^2]], {n, 100}]]

Out[302]=



Section 7

In[303]:=

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

Out[303]=

```
{, , 
```

In[304]:=

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

Out[304]=



In[305]:=

```
ColorNegate[Orange]
```






























Out[305]=



In[306]:=

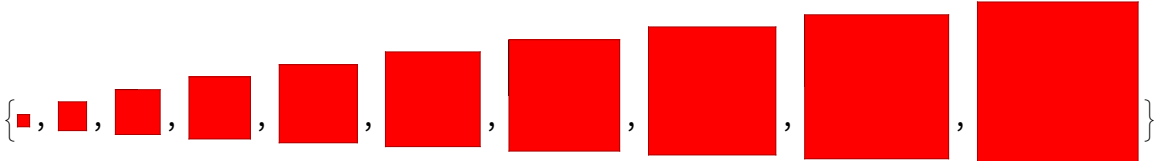
```
Table[Hue[x], {x, 0, 1, 0.02}]
```

Out[306]=

```
{, , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , 
```

```
In[312]:= Table[Style[Red, x], {x, 10, 100, 10}]
```

```
Out[312]=
```



```
In[313]:= Style[999, Red, 100]
```

```
Out[313]=
```



```
In[314]:= Table[Style[n^2, n^2], {n, 10}]
```

```
Out[314]=
```



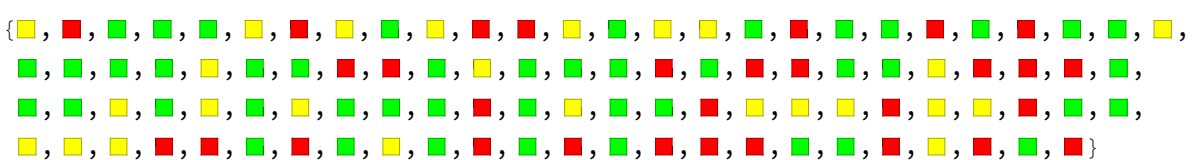
```
In[315]:= Part[{Red, Yellow, Green}]
```

```
Out[315]=
```



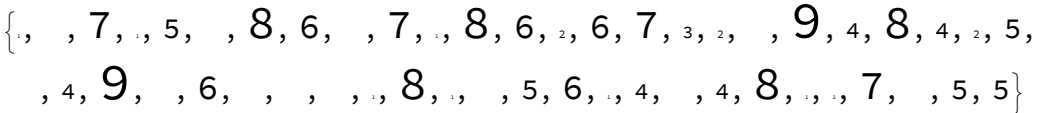
```
In[316]:= Table[Part[{Red, Yellow, Green}, RandomInteger[{1, 3}]], 100]
```

```
Out[316]=
```



```
In[317]:= Table[Style[Part[IntegerDigits[2^1000], n],  
3 * Part[IntegerDigits[2^1000], n]], {n, 50}]
```

```
Out[317]=
```

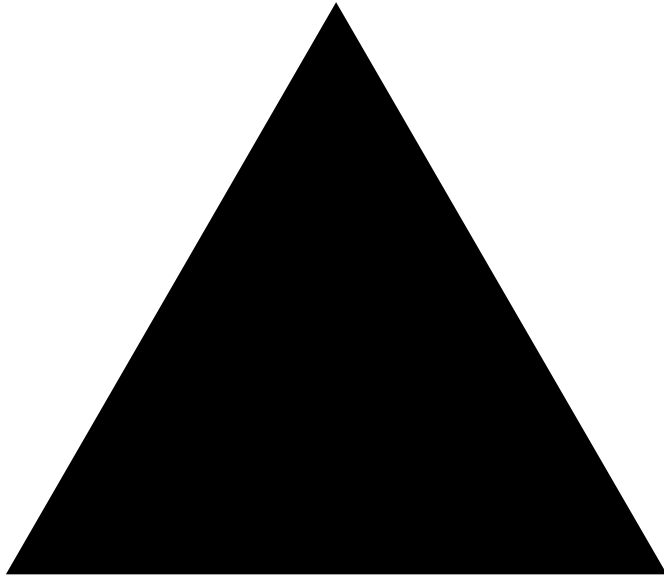


Section 8

In[318]:=

```
Graphics[RegularPolygon[3]]
```

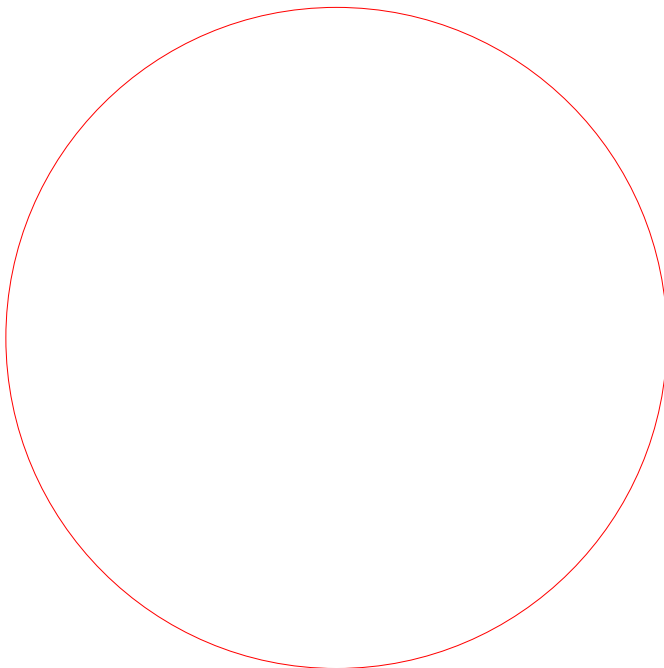
Out[318]=



In[319]:=

```
Graphics[Style[Circle[], Red]]
```

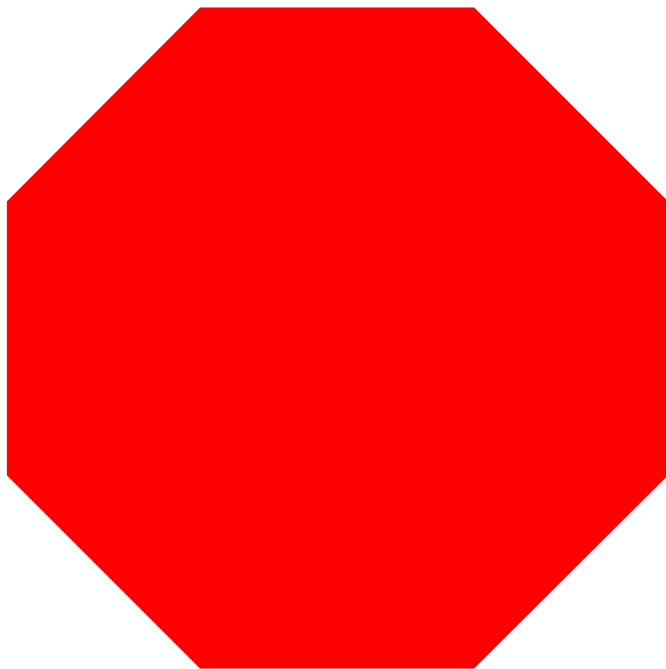
Out[319]=



In[320]:=

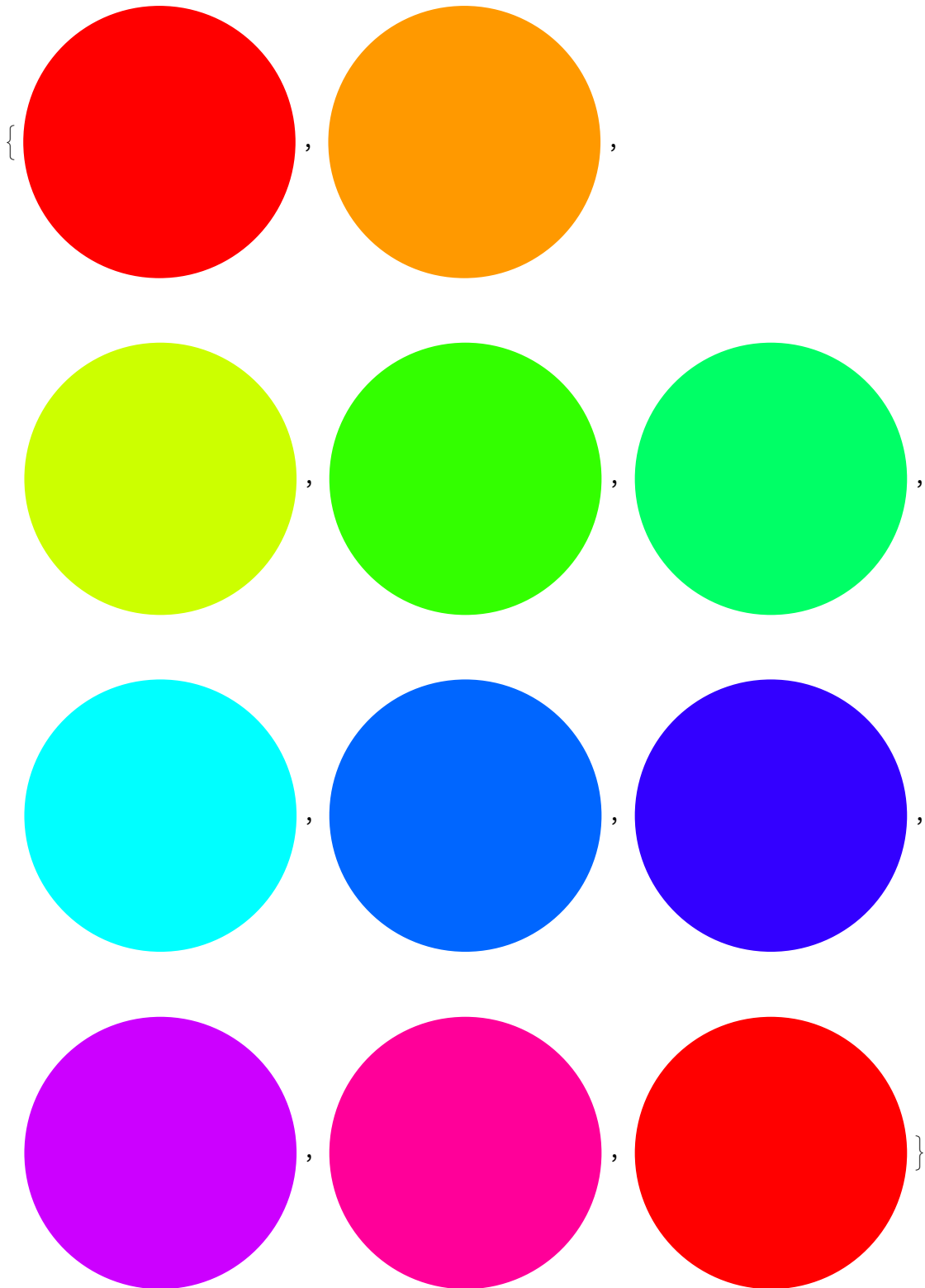
Graphics[Style[RegularPolygon[8], Red]]

Out[320]=




```
In[321]:= Table[Graphics[Style[Disk[], Hue[x]]], {x, 0, 1, 0.1}]
```

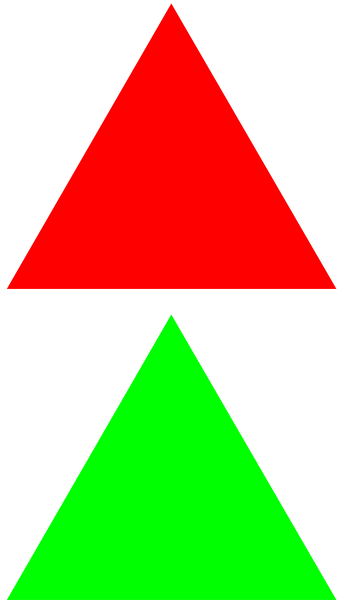
Out[321]=



In[322]:=

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

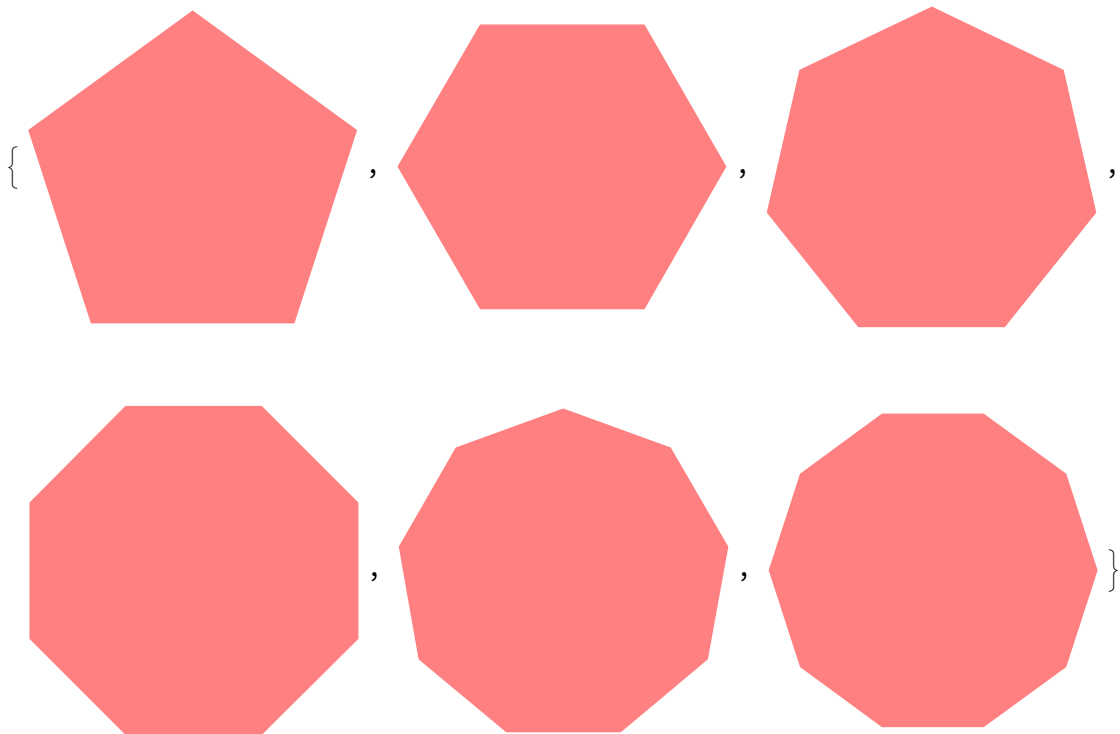
Out[322]=



In[323]:=

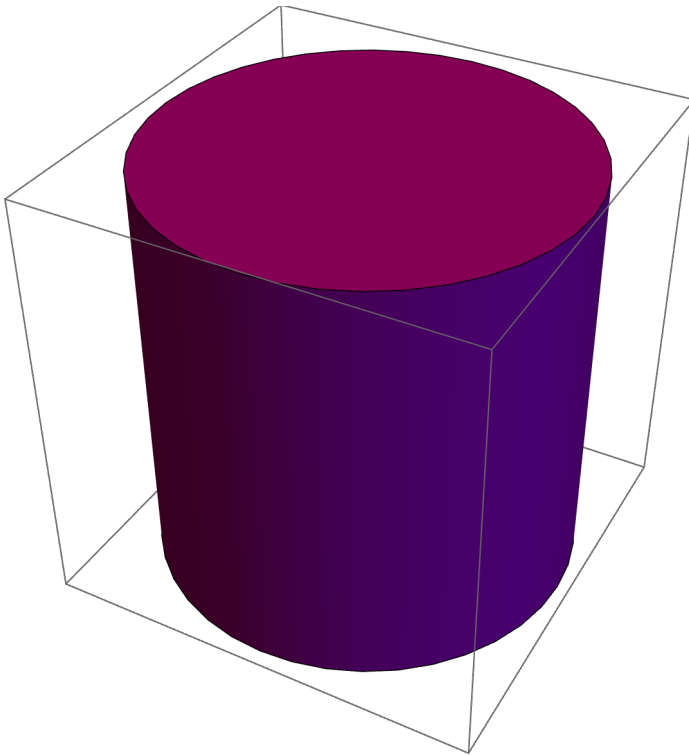
```
Table[Graphics[Style[RegularPolygon[x], Pink]], {x, 5, 10}]
```

Out[323]=



```
In[324]:= Graphics3D[Style[Cylinder[], Purple]]
```

Out[324]=



```
In[325]:= Graphics[Reverse[Table[Style[RegularPolygon[x], RandomColor[]], {x, 3, 8}]]]
```

Out[325]=

