

Rania — PS 2 — 2025-01-21

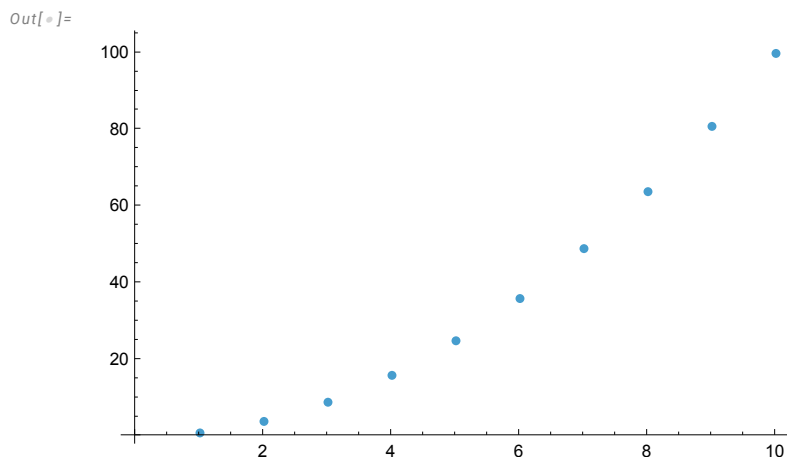
Rania — PS2 (2025-01-21)

Exercises from EIWL3 Section 5

```
In[*]:= (*5.1*) Reverse[Range[10]^2]
(*5.2*) Total[Range[10]^2]
(*5.3*) ListPlot[Range[10]^2]
(*5.4*) Sort[Join[Range[4], Range[4]]]
(*5.5*) Range[10, 20] (*what do they mean by +?*)
(*5.6*) Sort[Join[Range[5]^2, Range[5]^3]]
(*5.7*) IntegerLength[2^128]
(*5.8*) First[IntegerDigits[2^128]]
(*5.9*) Take[IntegerDigits[2^100], 10]
(*5.10*) Max[IntegerDigits[2^20]]
(*5.11*) Count[IntegerDigits[2^1000], 0]
(*5.12*) Part[Sort[IntegerDigits[2^20]], 2]
(*5.13*) ListLinePlot[IntegerDigits[2^128]]
(*5.14*) Drop[Take[Range[100], 20], 10]
```

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

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



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

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

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

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

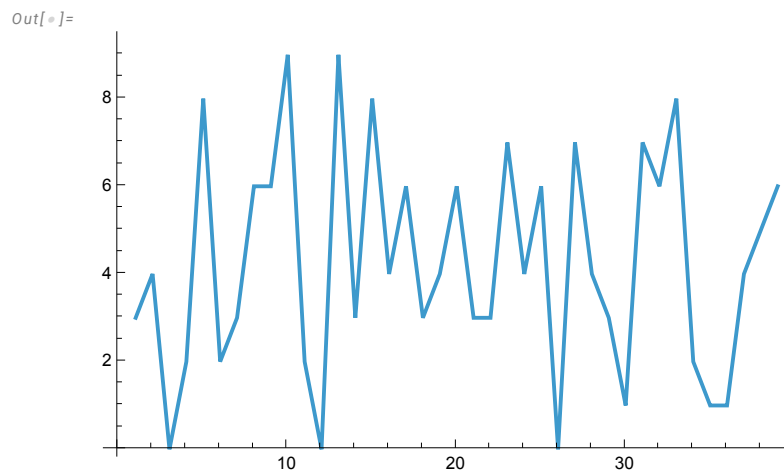
```
Out[*]=
3
```

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

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

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

```
Out[*]=
1
```



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

Exercises from EIWL3 Section 6

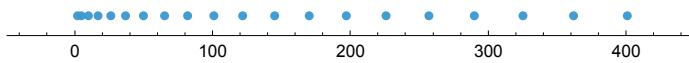
```
In[*]:= (*6.1*) Table[1000, 5]
(*6.2*) Table[n^3, {n, 10, 20}]
(*6.3*) NumberLinePlot[Table[n^2, {n, 20}]]
(*6.4*) Range[2, 20, 2]
(*6.5*) Table[n, {n, 10}] == Range[10]
(*6.6*) BarChart[Table[n^2, {n, 10}]]
(*6.7*) IntegerDigits[Table[n^2, {n, 10}]]
(*6.8*) ListLinePlot[Table[Length[IntegerDigits[n^2]], {n, 100}]]
(*6.9*) Table[First[IntegerDigits[n^2]], {n, 20}]
(*6.10*) ListLinePlot[First[IntegerDigits[n^2]], {n, 100}]
```

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

Out[*]=

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

Out[*]=



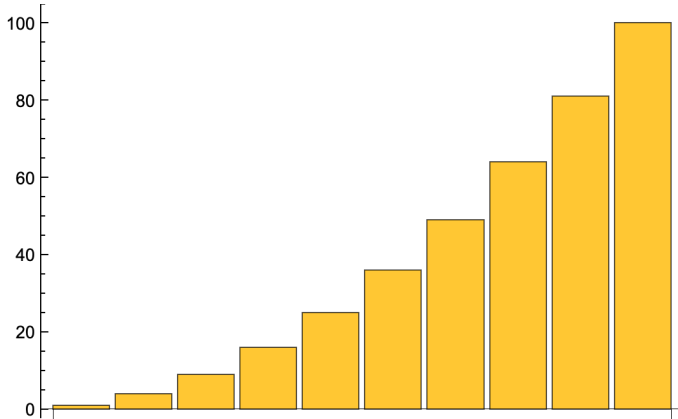
Out[*]=

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

Out[*]=

True

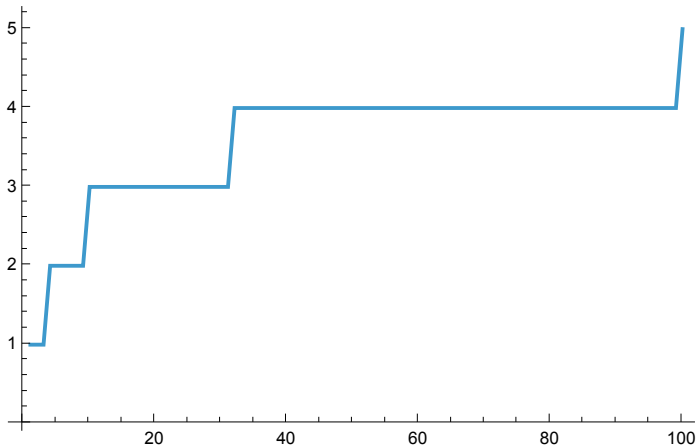
Out[*]=



Out[*]=

{{1}, {4}, {9}, {1, 6}, {2, 5}, {3, 6}, {4, 9}, {6, 4}, {8, 1}, {1, 0, 0}}

Out[*]=



Out[*]=

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

ListLinePlot: Options expected (instead of {n, 100}) beyond position 1 in ListLinePlot[n², {n, 100}]. An option must be a rule or a list of rules. [i](#)

Out[*]=

ListLinePlot[n², {n, 100}]

Exercises from EIWL3 Section 7

```

In[ ]:= (*7.1*) {Red, Yellow, Green}
(*7.2*) Column[{Red, Yellow, Green}]
(*7.3*) ColorNegate[Orange]
(*7.4*) Table[Hue[n], {n, 0, 1, 0.02}]
(*7.5*) Table[RGBColor[1, G, 1], {G, 0, 1, 0.05}]
(*7.6*) Blend[{Pink, Yellow}]
(*7.7*) Table[Blend[{Yellow, Hue[n]}], {n, 0, 1, 0.05}]
(*7.8*) Table[Style[n, Hue[n]], {n, 0, 1, 0.1}]
(*7.9*) Style[Purple, 100]
(*7.10*) Table[Style[Red, x], {x, 10, 100, 10}]
(*7.11*) Style[999, 100, Red]
(*7.12*) Table[Style[x^2, x^2], {x, 10}]
(*7.13*) Part[{Red, Yellow, Green}, RandomInteger[{1, 3}, 100]]
(*7.14*) Table[
  Style[Part[IntegerDigits[2^1000], n], 3 Part[IntegerDigits[2^1000], n]], {n, 50}]

```

Out[]:=

{}


Out[]:=



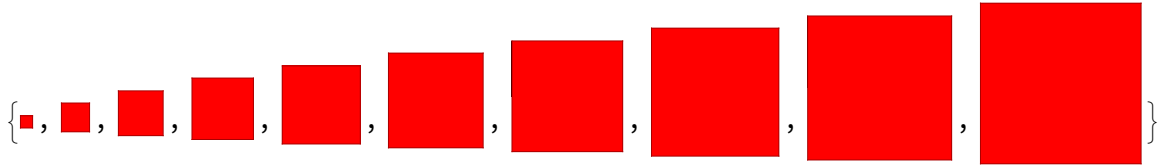
Out[]:=



Out[]:=

{<

Out[]=



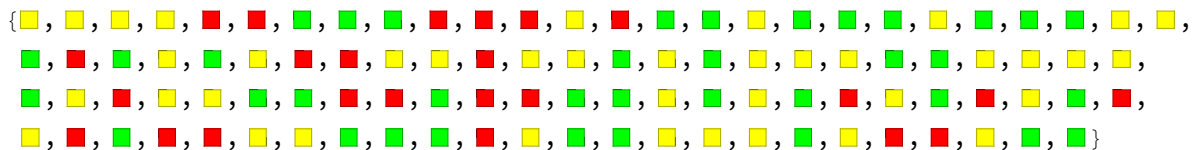
Out[]=

999

Out[]=

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

Out[]=



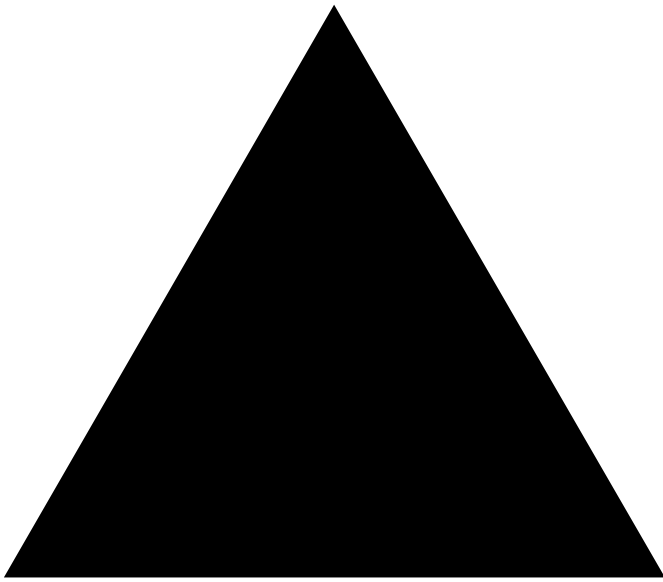
Out[]=

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

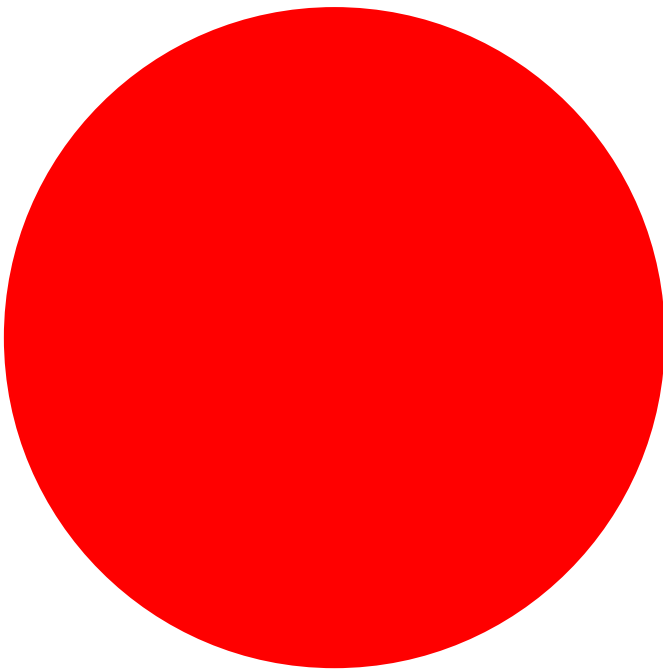
Exercises from EIWL3 Section 8

```
In[ ]:= (*8.1*) Graphics[RegularPolygon[3]]
(*8.2*) Graphics[{Red, Disk[]}]
(*8.3*) Graphics[{Red, RegularPolygon[8]}]
(*8.4*) Table[Graphics[Style[Disk[], Hue[n]]], {n, 0, 1, 0.1}]
(*8.5*) Column[{Graphics[Style[RegularPolygon[3], Red]],
  Graphics[Style[RegularPolygon[3], Green]]}]
(*8.6*) Table[Graphics[Style[RegularPolygon[n], Pink]], {n, 5, 10}]
(*8.7*) Graphics3D[{Purple, Cylinder[]}]
(*8.8*) Graphics[Reverse[Table[Style[RegularPolygon[n], RandomColor[]], {n, 3, 8}]]]
```

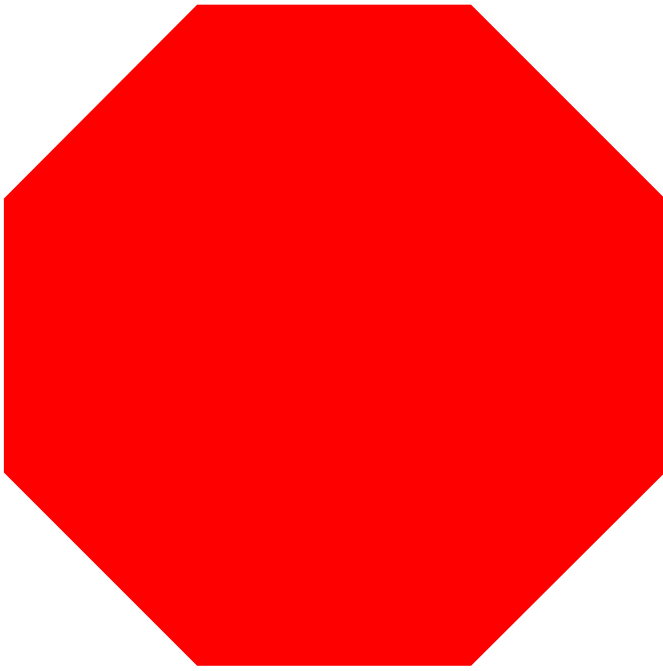
Out[]=



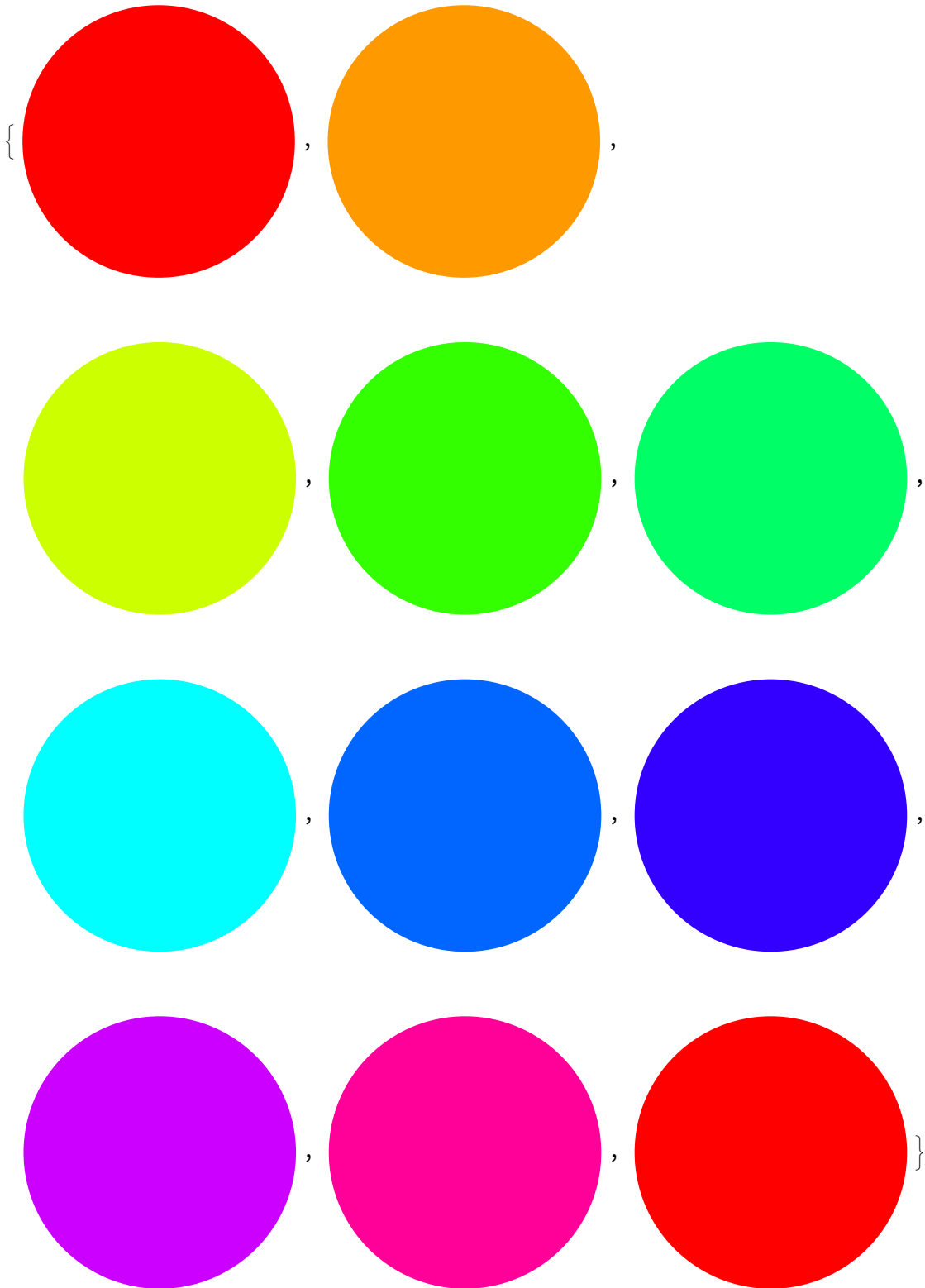
Out[]=



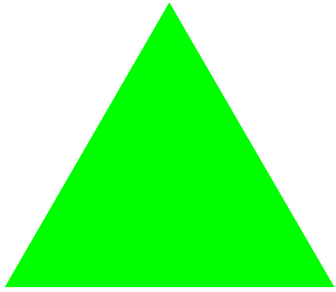
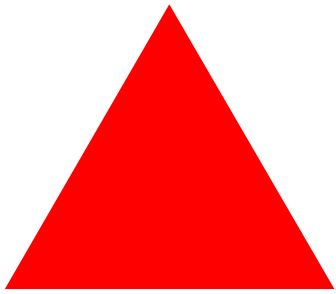
Out[]=



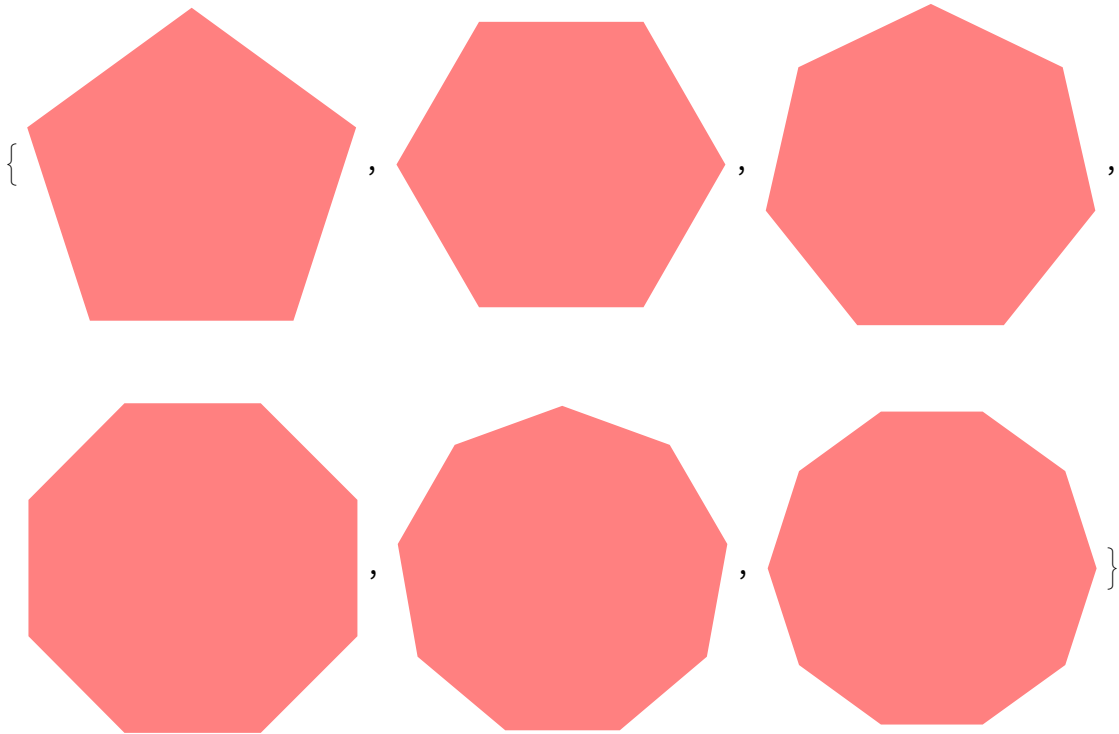
Out[]=



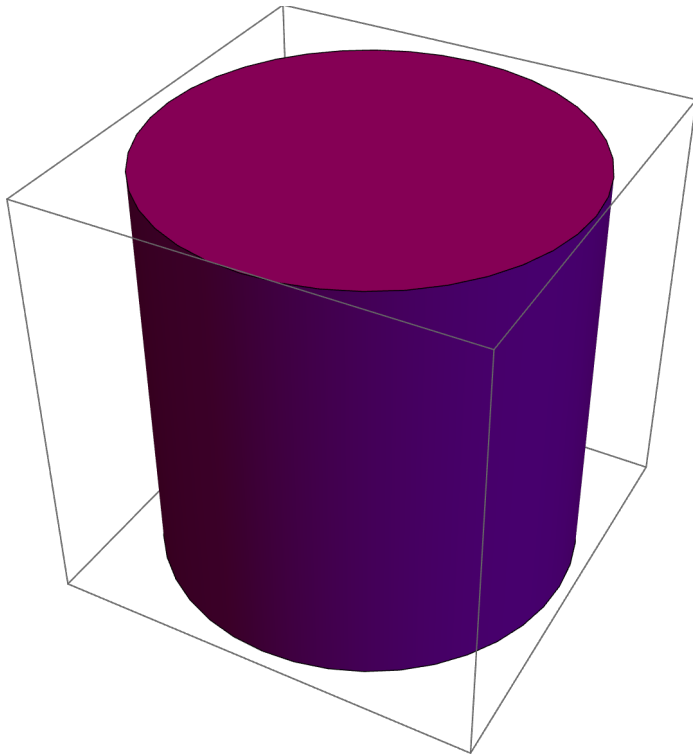
Out[]=



Out[]=



Out[]=



Out[]=

