

Eli — PS 3 — 2025-01-24

Chapter 9

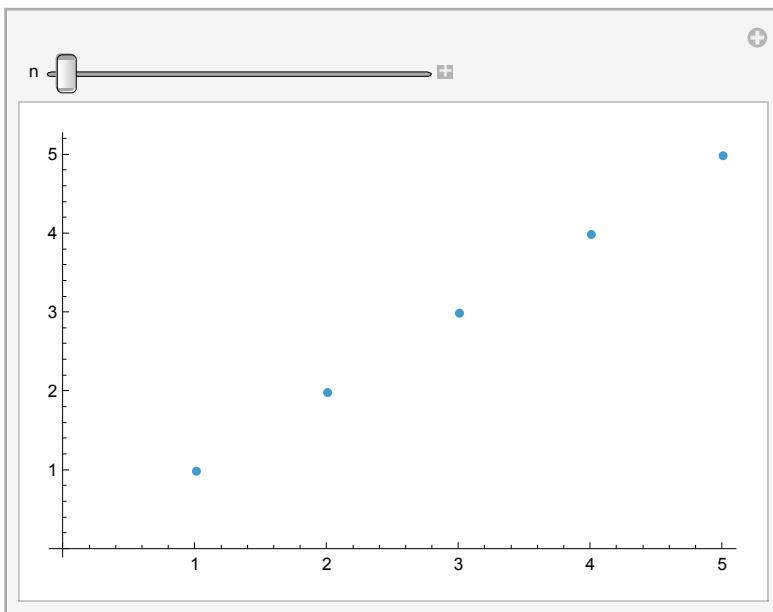
```
In[90]:= Manipulate[Range[n], {n, 0, 100}]
```

```
Out[90]=
```



```
In[91]:= Manipulate[ListPlot[Range[n]], {n, 5, 50}]
```

```
Out[91]=
```

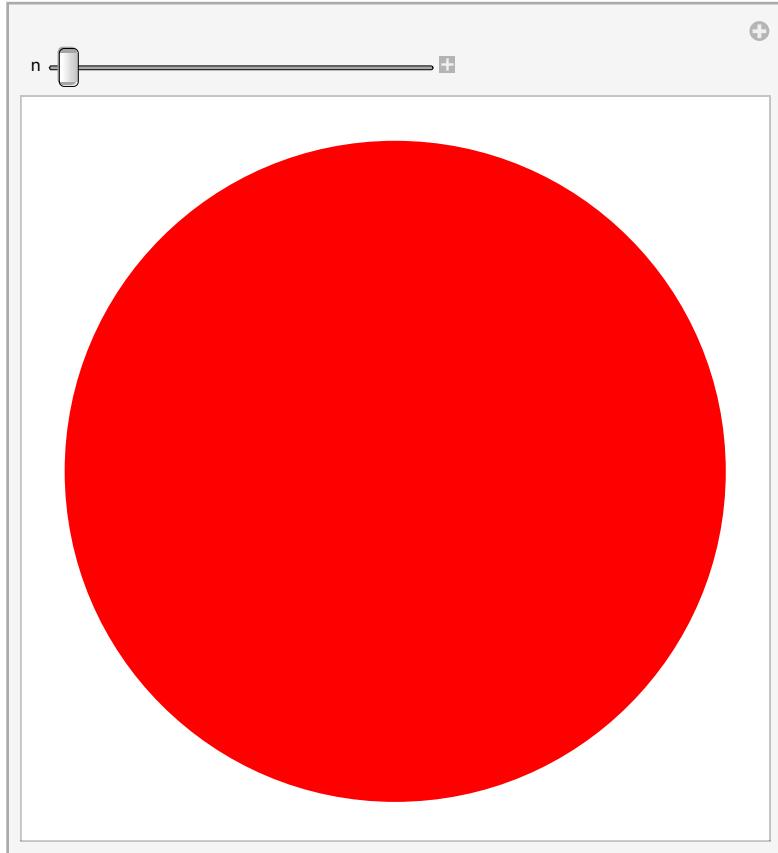


```
In[92]:= Manipulate[Column[Table[x, n]], {n, 1, 10}]
```

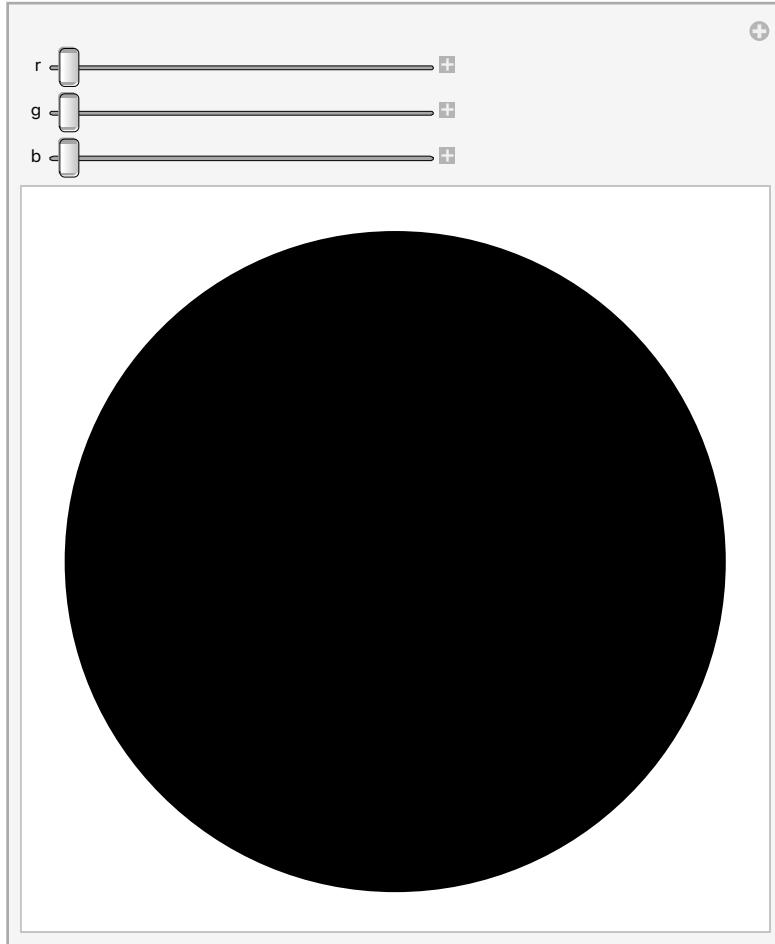
```
Out[92]=
```



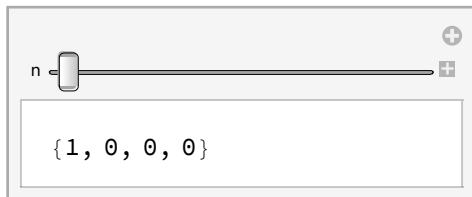
```
In[93]:= Manipulate[Graphics[Style[Disk[], Hue[n]]], {n, 0, 1, 0.02}]  
Out[93]=
```



```
In[94]:= Manipulate[Graphics[Style[Disk[], RGBColor[r, g, b]]], {r, 0, 1}, {g, 0, 1}, {b, 0, 1}]  
Out[94]=
```



```
In[95]:= Manipulate[IntegerDigits[n], {n, 1000, 9999, 1}]  
Out[95]=
```



```
In[96]:= IntegerDigits[9999]  
Out[96]=  
{9, 9, 9, 9}
```

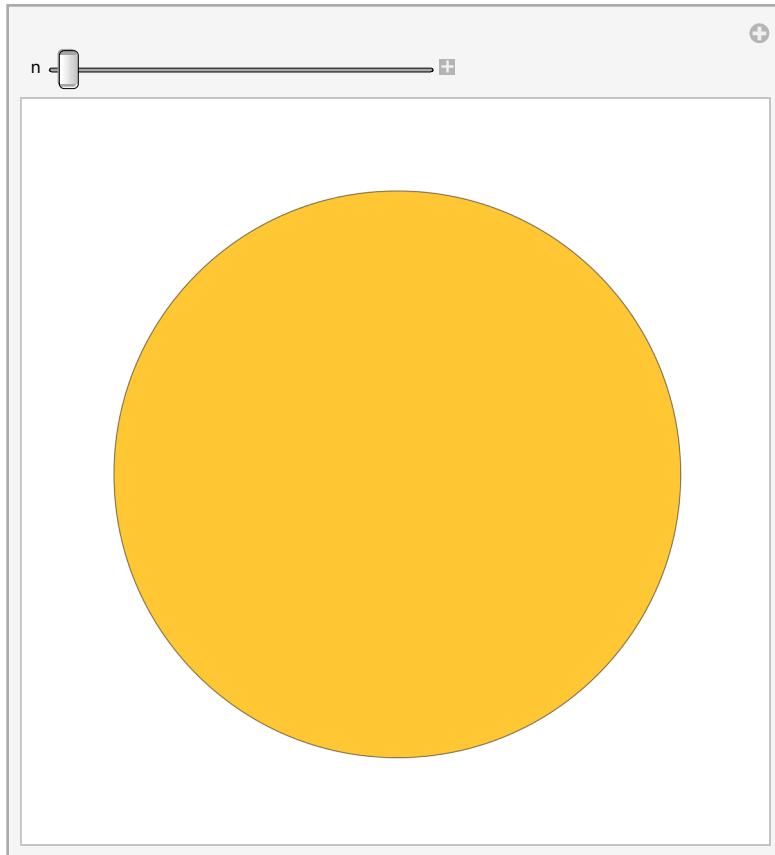
```
In[97]:= Manipulate[Table[Hue[n], {n, 0, 1, 1/m}], {m, 5, 50}]
```

```
Out[97]=
```



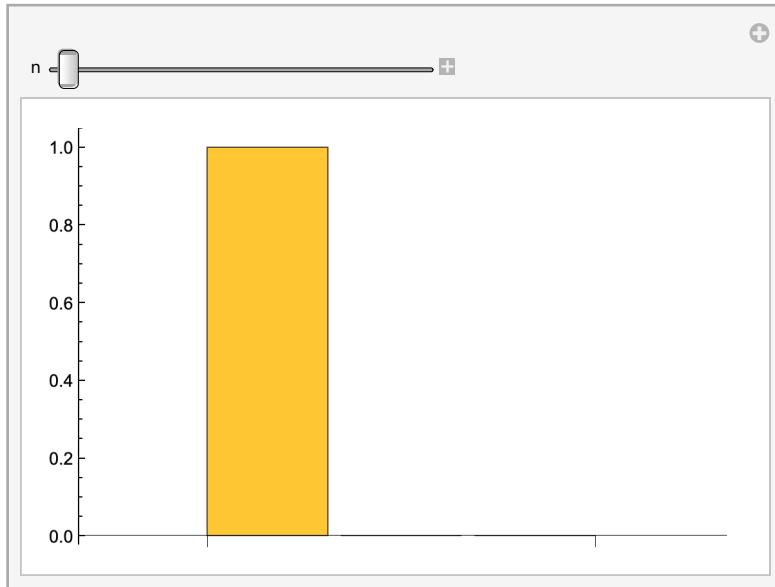
```
In[98]:= Manipulate[PieChart[Table[1, n]], {n, 1, 10}]
```

```
Out[98]=
```



```
In[99]:= Manipulate[BarChart[IntegerDigits[n]], {n, 100, 999, 1}]
```

```
Out[99]=
```



```
In[100]:=
```

```
Manipulate[Table[RandomColor[], n], {n, 1, 50}]
```

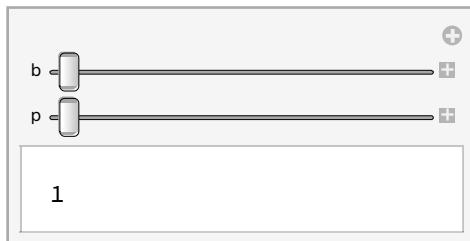
```
Out[100]=
```



```
In[101]:=
```

```
Manipulate[Column[Range[b]^p], {b, 1, 25}, {p, 1, 10, 1}]
```

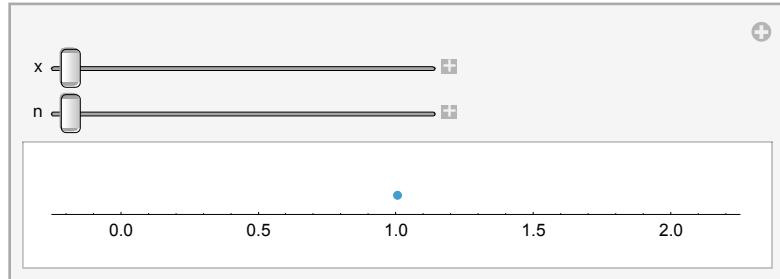
```
Out[101]=
```



In[102]:=

```
Manipulate[NumberLinePlot[Range[x]^n], {x, 1, 10}, {n, 1, 5}]
```

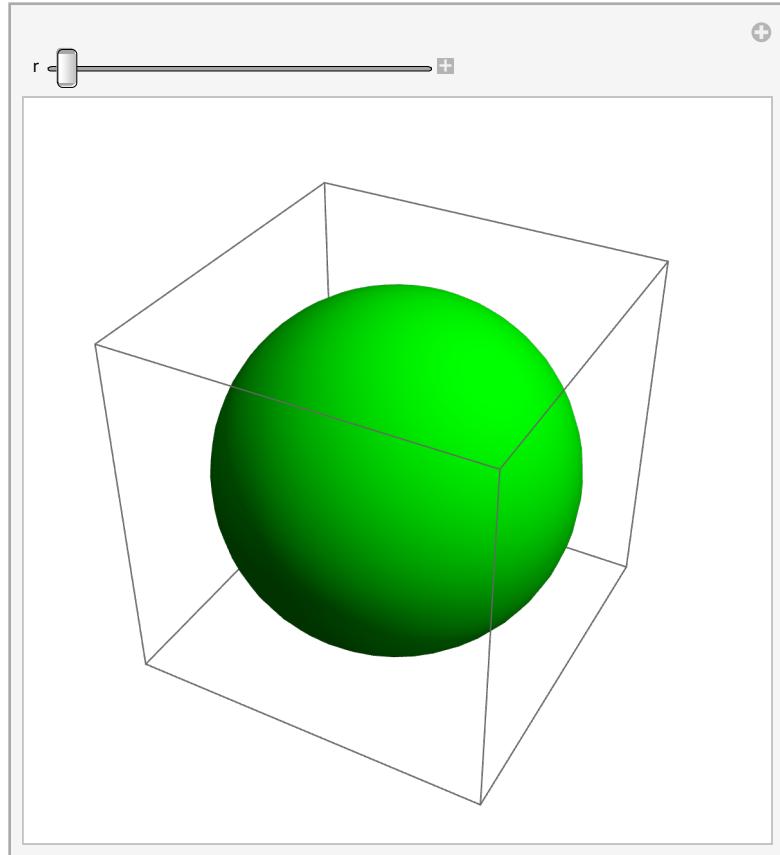
Out[102]=



In[103]:=

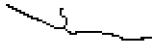
```
Manipulate[Graphics3D[Style[Sphere[], RGBColor[r, 255 - r, 0]]], {r, 0, 255}]
```

Out[103]=



Chapter 10

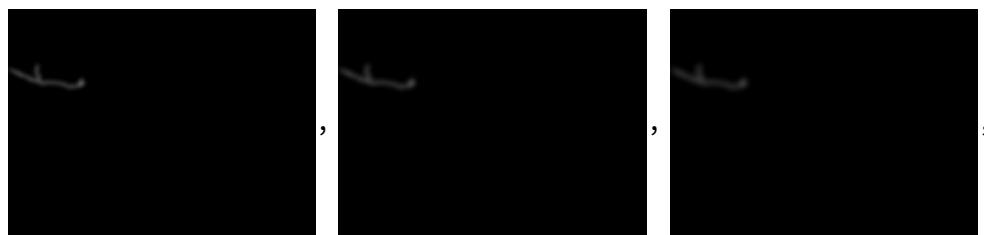
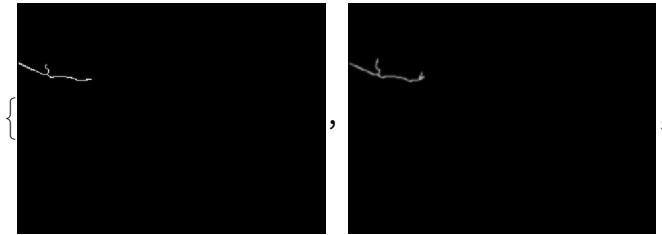
```
In[104]:= ColorNegate[EdgeDetect[CurrentImage[]]]  
Out[104]=
```



```
In[105]:= Manipulate[Blur[CurrentImage[], n], {n, 0, 20}]
```

```
In[106]:= Table[Blur[EdgeDetect[CurrentImage[], n], {n, 1, 10}]
```

```
Out[106]=
```



In[107]:=

```
ImageCollage[{CurrentImage[], Binarize[CurrentImage[]],  
ColorNegate[CurrentImage[]], EdgeDetect[CurrentImage[]]}]
```

Out[107]=



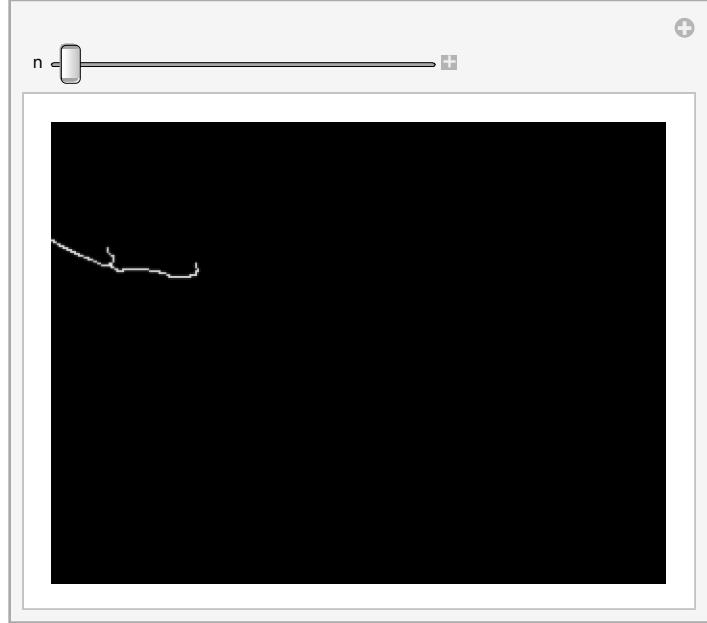
In[108]:=

```
ImageAdd[{CurrentImage[], Binarize[CurrentImage[]]}]
```

Out[108]=

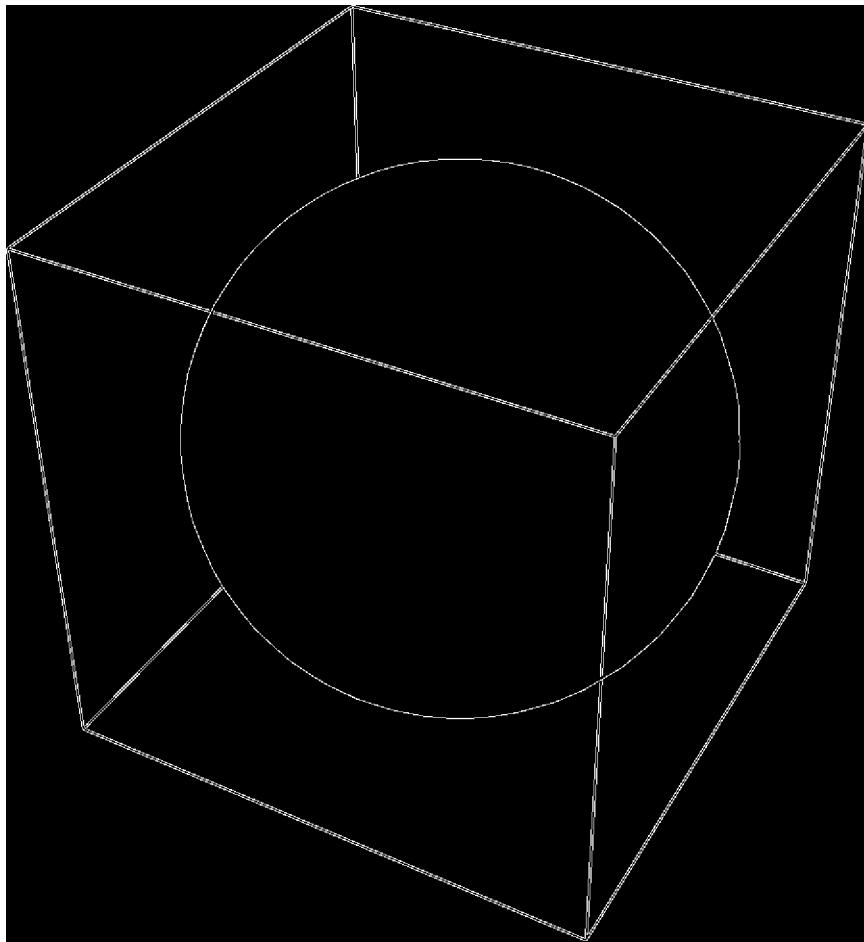


```
In[109]:= Manipulate[Blur[EdgeDetect[CurrentImage[], n], {n, 1, 20}]  
Out[109]=
```

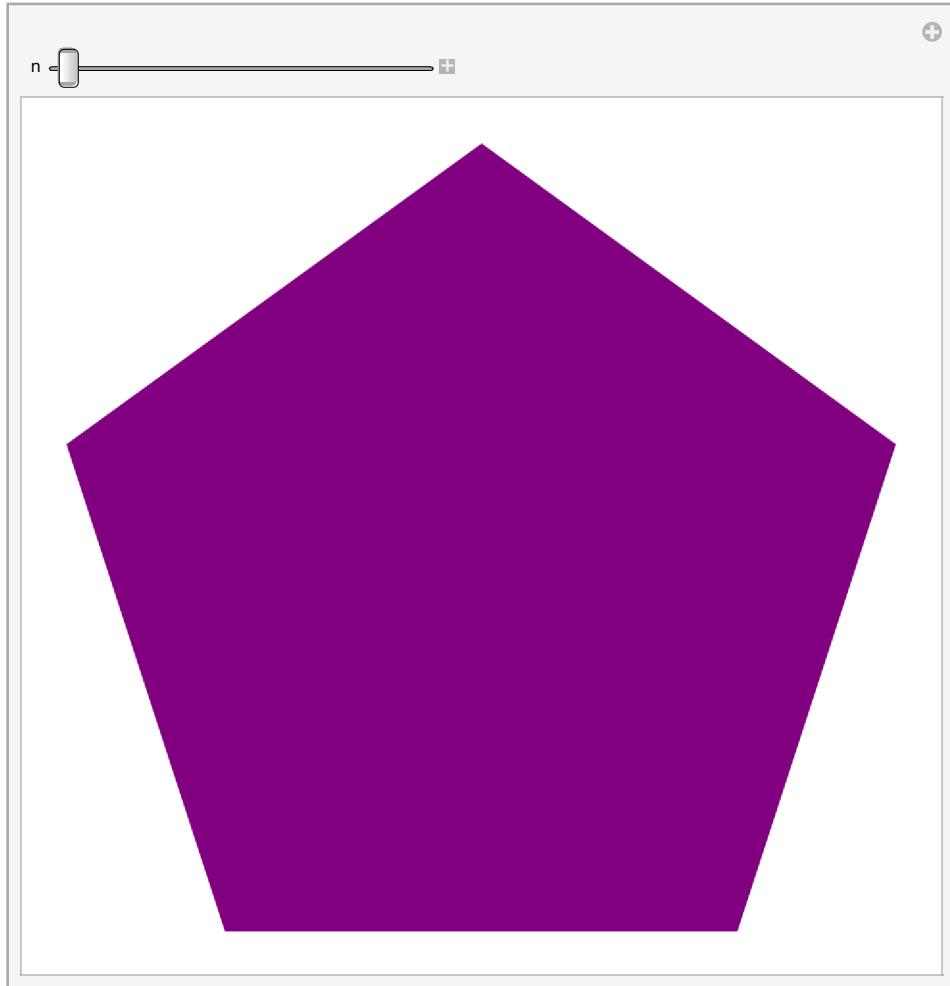


```
In[110]:= EdgeDetect[Graphics3D[Sphere[]]]
```

```
Out[110]=
```



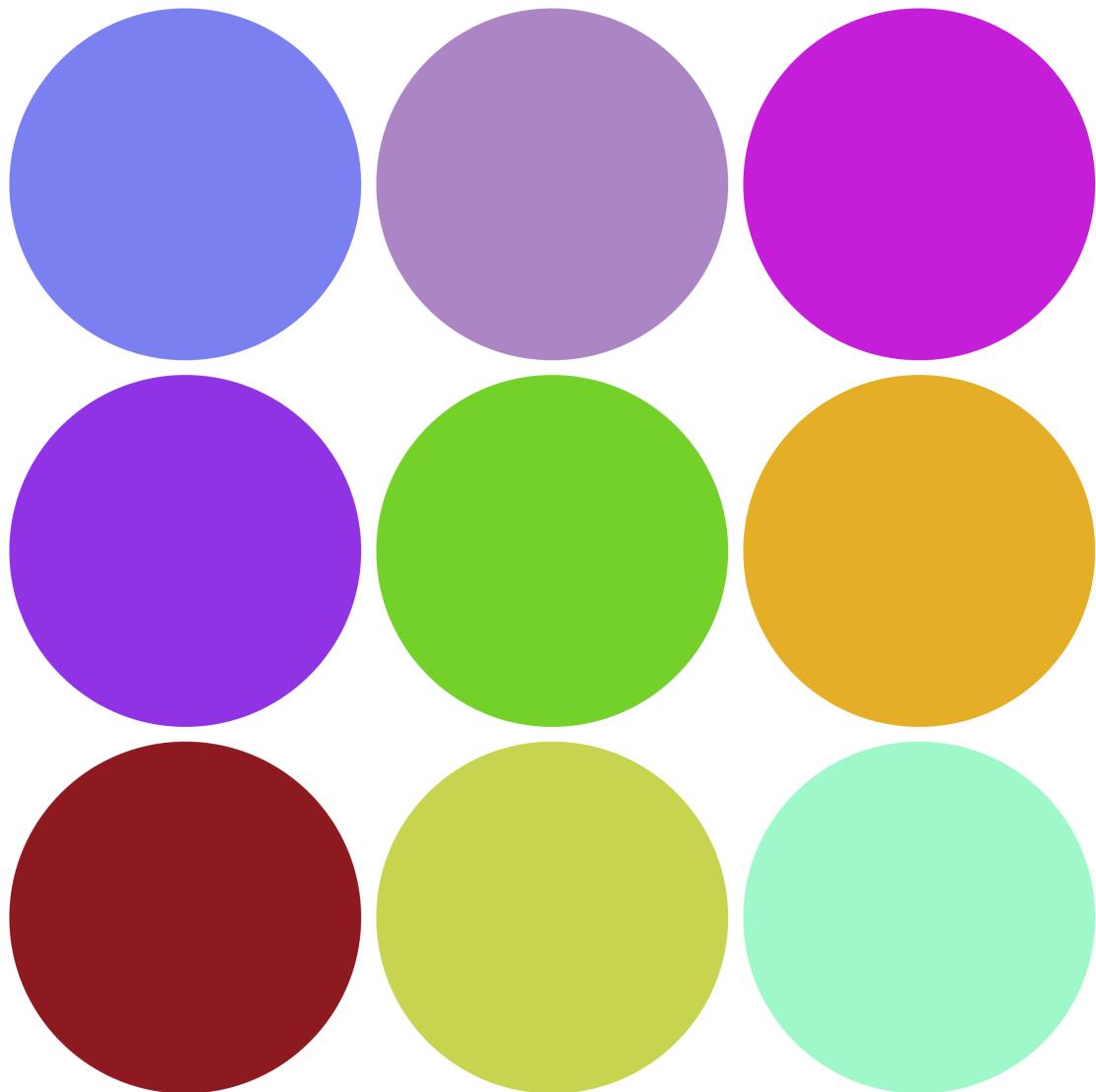
```
In[111]:= Manipulate[Blur[Graphics[Style[RegularPolygon[5], Purple]], n], {n, 0, 20}]  
Out[111]=
```



In[112]:=

```
ImageCollage[Table[Graphics[Style[Disk[], RandomColor[]]], 9]]
```

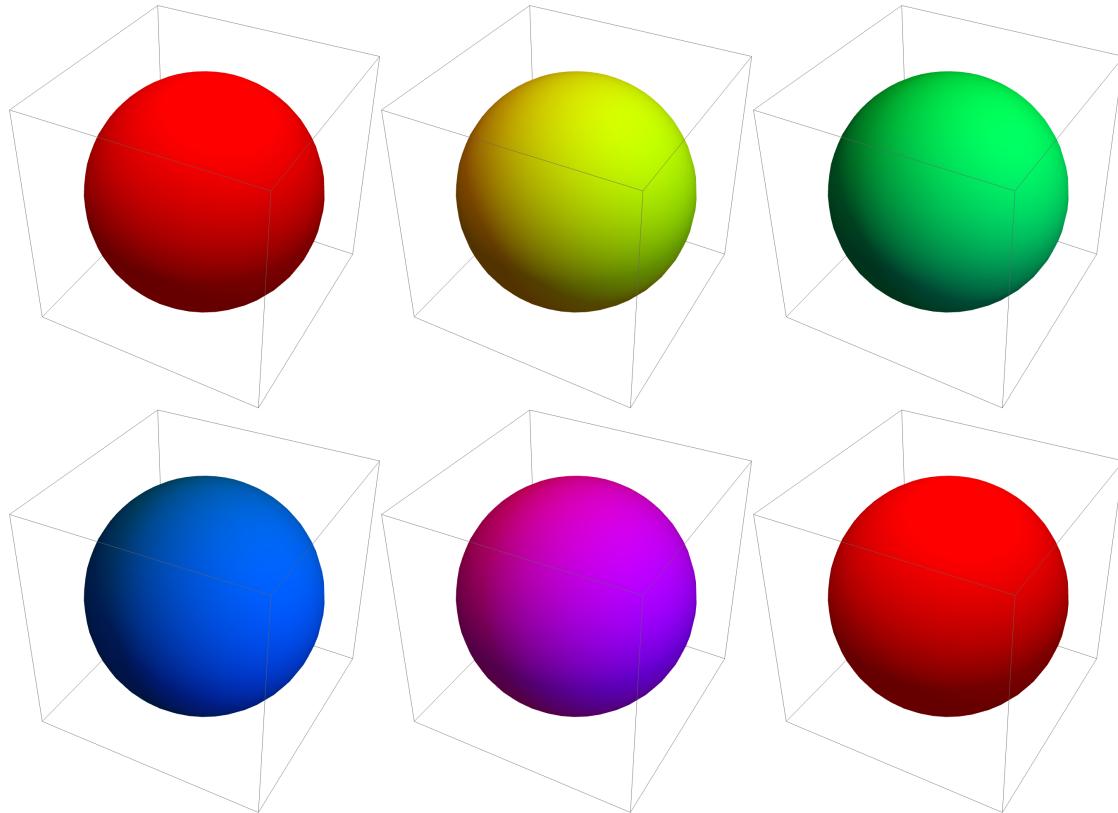
Out[112]=



In[113]:=

```
ImageCollage[Table[Graphics3D[Style[Sphere[], Hue[n]]], {n, 0, 1, 0.2}]]
```

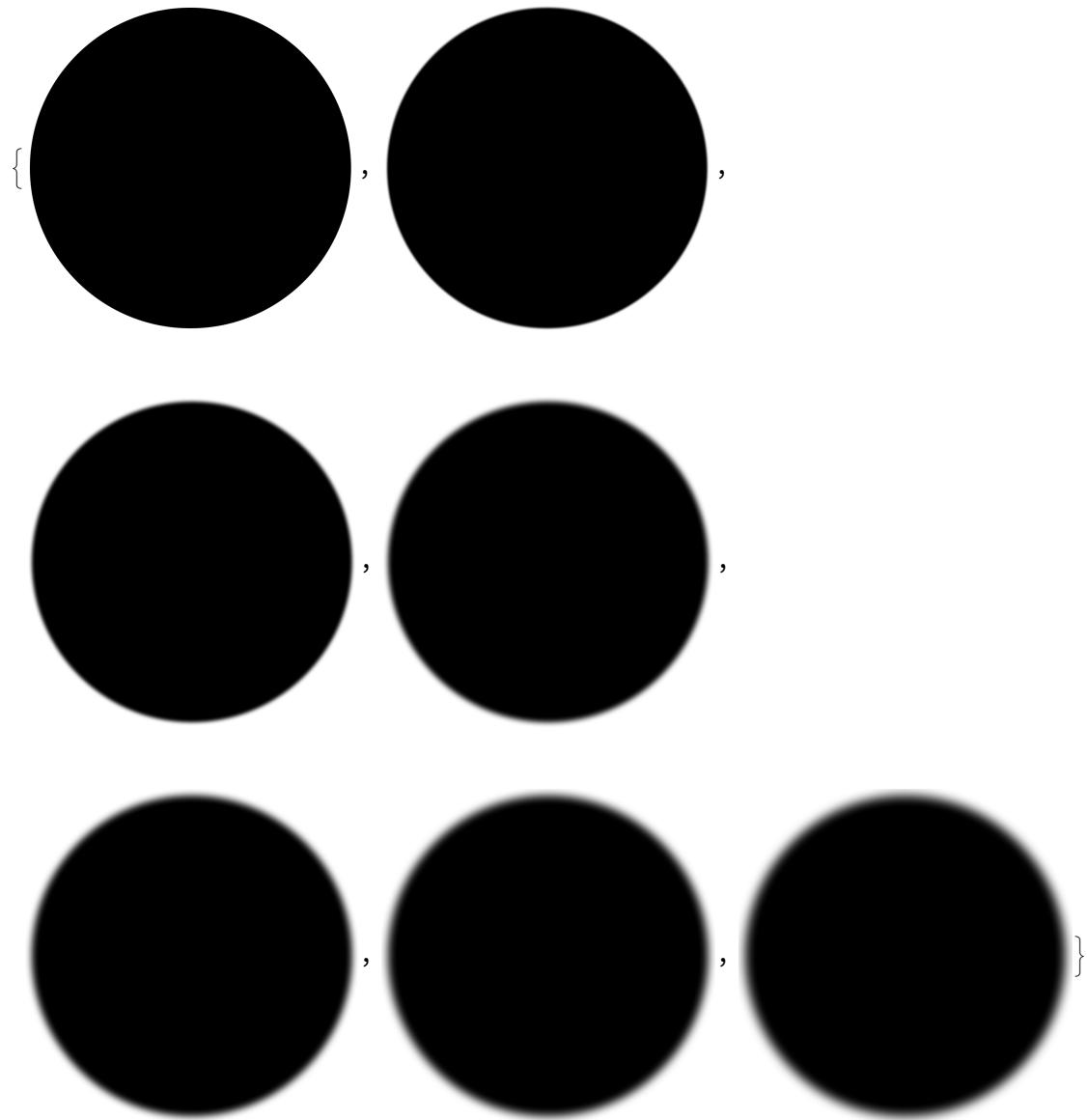
Out[113]=



In[114]:=

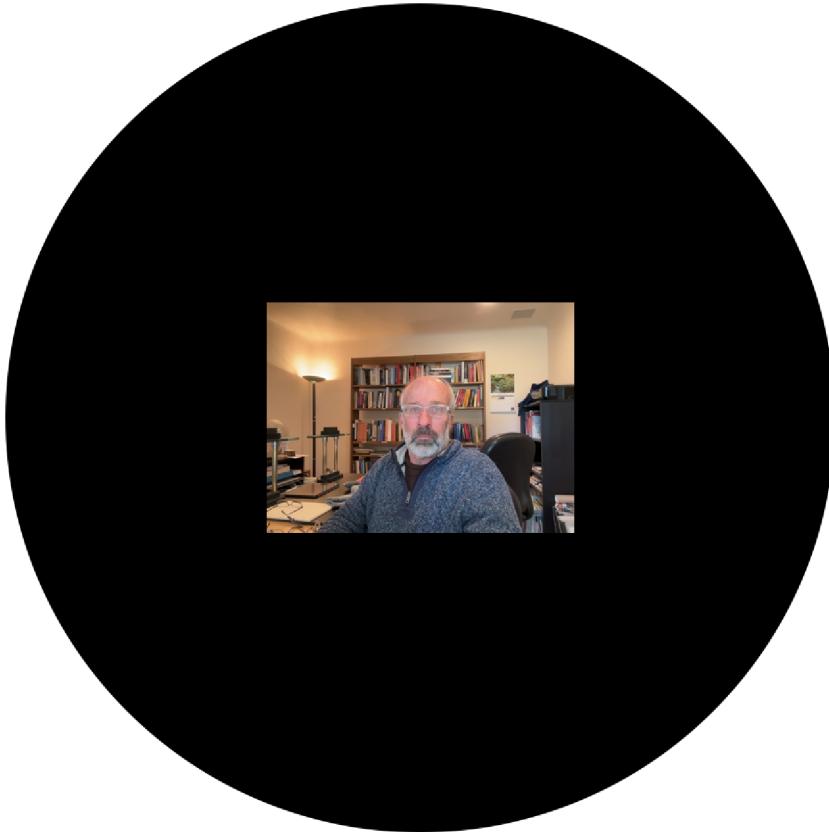
```
Table[Blur[Graphics[Disk[]], n], {n, 0, 30, 5}]
```

Out[114]=



In[115]:=

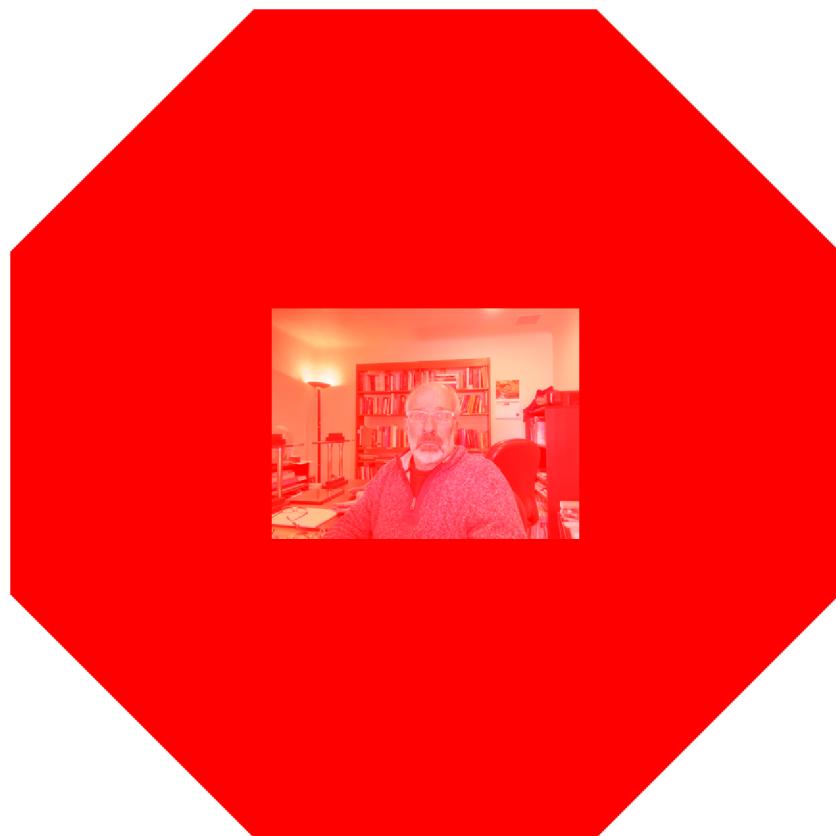
```
In[116]:= ImageAdd[{Graphics[Disk[]], CurrentImage[]}]  
Out[116]=
```



In[117]:=

```
ImageAdd[{Graphics[Style[RegularPolygon[8], Red]], CurrentImage[]}]
```

Out[117]=



In[118]:=

```
ImageAdd[{CurrentImage[], ColorNegate[EdgeDetect[CurrentImage[]]]}]
```

Out[118]=



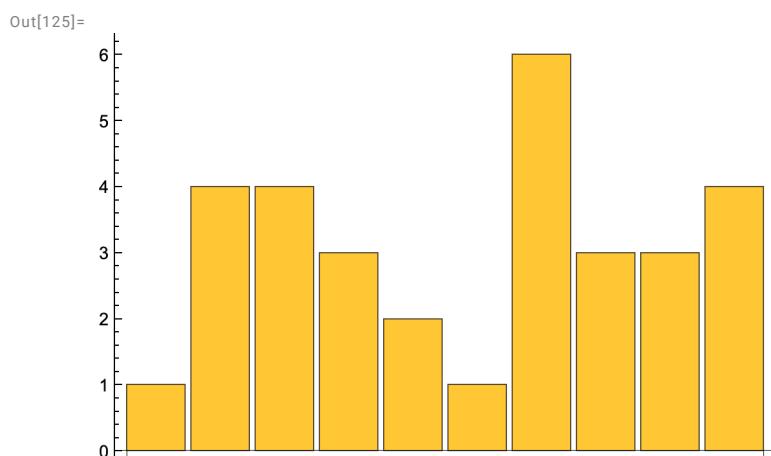
Chapter 10

```
In[124]:= Column[Table[StringTake["This is about strings", n],
{n, StringLength["This is about strings"]}]]

Out[124]=
```

```
T
Th
Thi
This
This
This i
This is
This is
This is a
This is ab
This is abo
This is abou
This is about
This is about
This is about s
This is about st
This is about str
This is about stri
This is about strin
This is about string
This is about strings
```

```
In[125]:= BarChart[StringLength[TextWords["A long time ago in a galaxy far, far away"]]]
```



```
In[126]:= StringLength[WikipediaData["computer"]]
```

```
Out[126]= 60266
```

```
In[127]:= Length[TextWords[WikipediaData["computer"]]]
```

```
Out[127]= 9271
```

```
In[128]:= Take[TextSentences[WikipediaData["strings"]], 1]
Out[128]= {String or strings may refer to:}

In[129]:= StringJoin[StringTake[TextSentences[WikipediaData["computers"]], 1]]
Out[129]= AMTTACCESEMTTCTPP=ITTDDBTTT==DTLTTTSITIIDMTAAATTIASIBIAITITIITSI=CCAHTFTTTAEBNH
=ITax()2{,THI=DHTTTTAB==CBTDETTITIRTZTT=PTEITDTTHACIINCTLOTIIIHBT==TTHTVTE=
ECWATIHJTIIAATBAIL=TJFCJTHATHTTWITT=TTDTKIHKNHNPNIWTGFTTWISTITS=TLTTTT=C=A=SH=
TC==ATIET=WTTSC=TSC=TCATRDIRTPWIWSAIT=TES=TTSHTALTSG=
AETTLSIETWOAMTTRACrRIISFIIG=IDOHCIAMA=WTOBITSTBSIT=SMSTSS=SSCICW=T=TTMIAL=
TITHTFMPWSTCBOTOI=ITTSTTITMWITC=PUTTS=MF=ATHHIT=PALTP=ETHOBSA=CTITTCITA"=AWA=
TMH=TQCVSLTTT=ACARPE=AT=====M

In[130]:= Max[StringLength[WordList[]]]
Out[130]= 23

In[131]:= Count[LetterNumber[StringTake[WordList[], 1]], 17]
Out[131]= 194

In[132]:= ListLinePlot[StringLength[Take[WordList[], 1000]]]
Out[132]=
```

In[133]:=

```
WordCloud[Table[Characters[Part[WordList[], RandomInteger[39176]]], 100]]  
(*Not enough memory to compute for entire  
wordlist so I just did 100 random words from it*)
```

Out[133]=

