EIWL Sections 9-11 - Harper Yonago

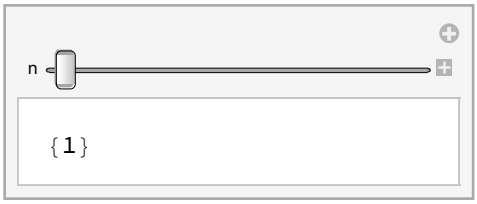
In[230]:=

Section 9

In[231]:=

```
Manipulate[Range[n], {n, 1, 100, 1}]
```

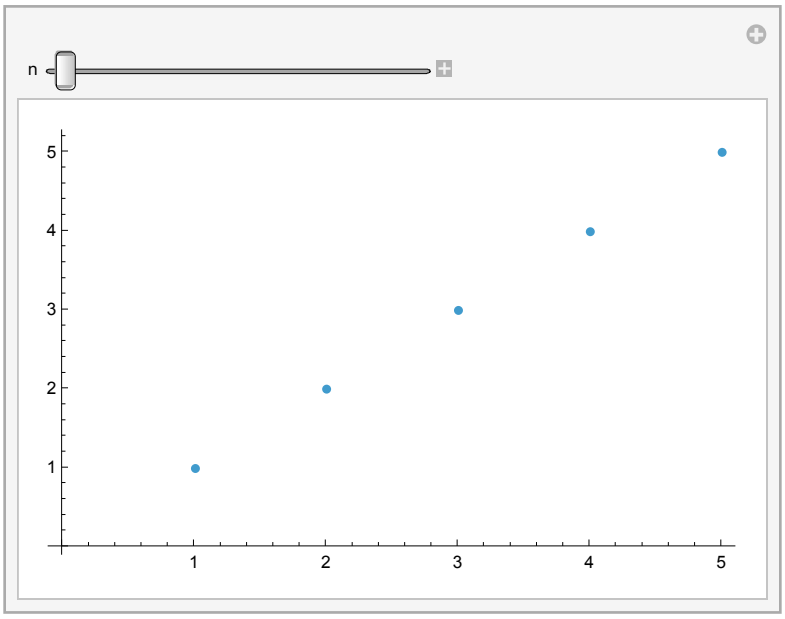
Out[231]=



In[232]:=

```
Manipulate[ListPlot[Range[n]], {n, 5, 50, 1}]
```

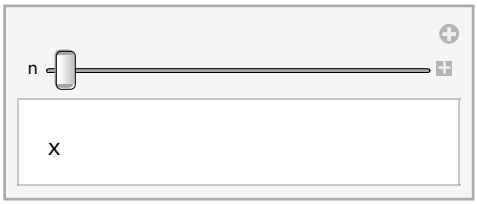
Out[232]=



In[233]:=

```
Manipulate[Column[Table[x, n]], {n, 1, 10, 1}]
```

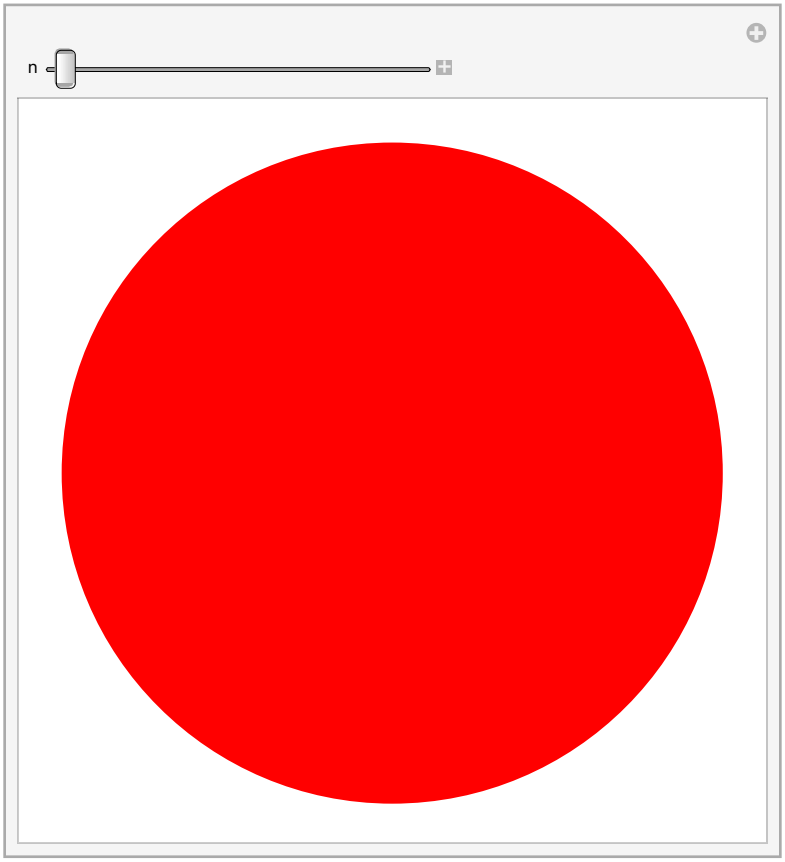
Out[233]=



In[234]:=

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

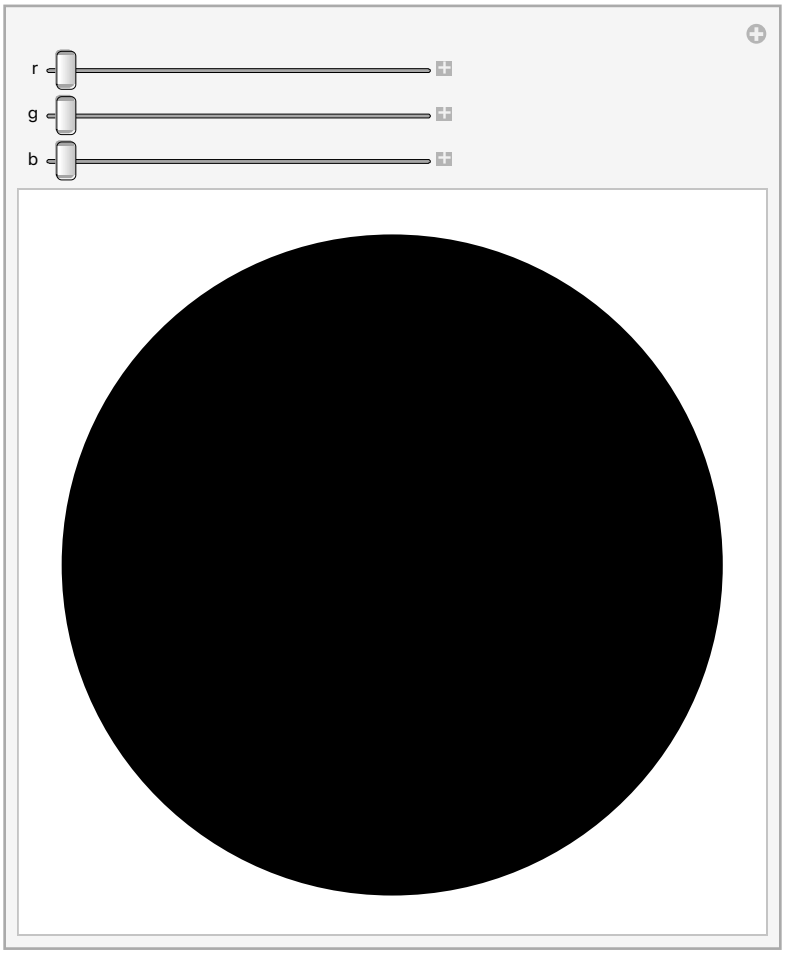
Out[234]=



In[235]:=

```
Manipulate[Graphics[Style[Disk[], RGBColor[r, g, b]]], {r, 0, 1}, {g, 0, 1}, {b, 0, 1}]
```

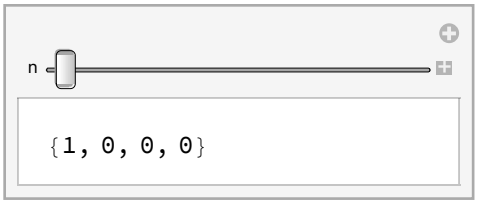
Out[235]=



In[236]:=

```
Manipulate[IntegerDigits[n], {n, 1000, 9999, 1}]
```

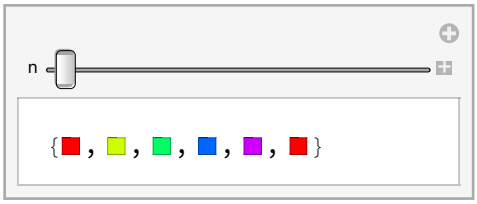
Out[236]=



In[237]:=

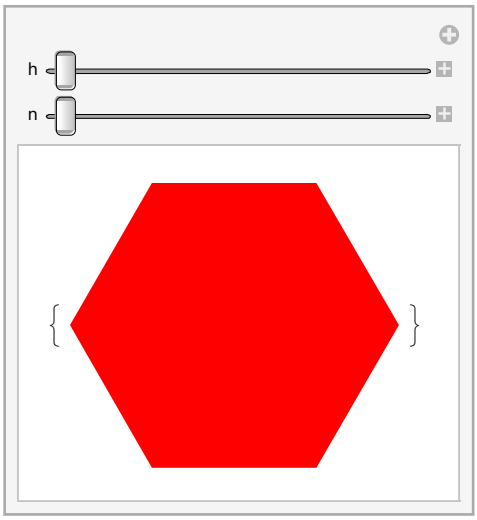
```
Manipulate[Table[Hue[h], {h, 0, 1, n}], {n, 0.2, 0.02}]
```

Out[237]=



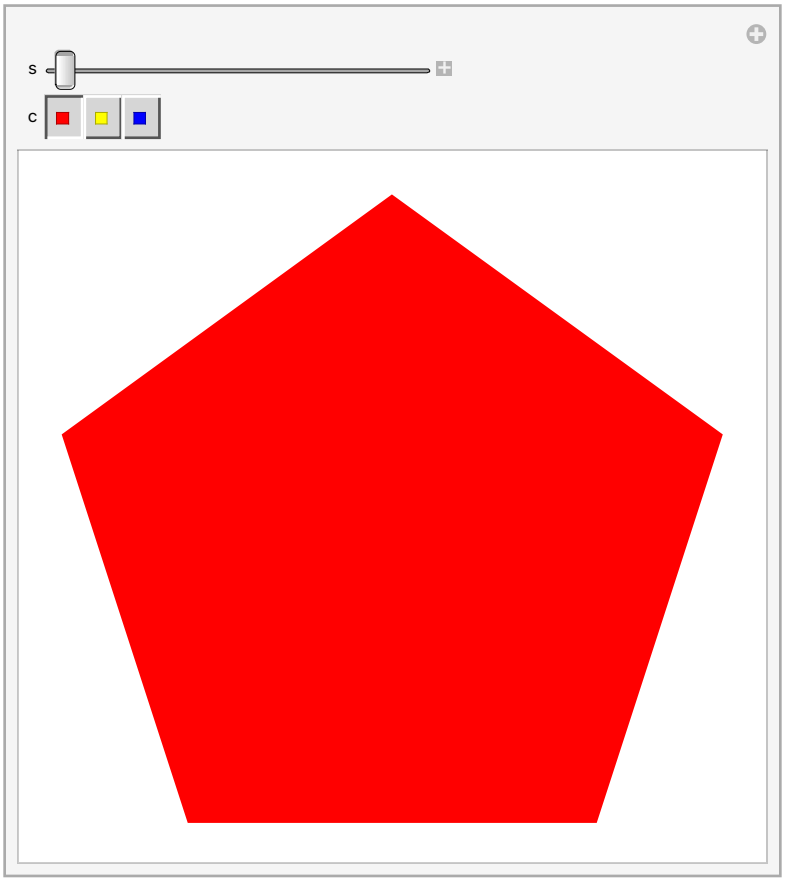
In[238]:=
```
Manipulate[Table[Graphics[Style[RegularPolygon[6], Hue[h]]], n],
 {h, 0, 1}, {n, 1, 10, 1}]
```

Out[238]=



In[239]:=
```
Manipulate[Graphics[Style[RegularPolygon[s], {c}]],
 {s, 5, 20, 1}, {c, {Red, Yellow, Blue}}]
```

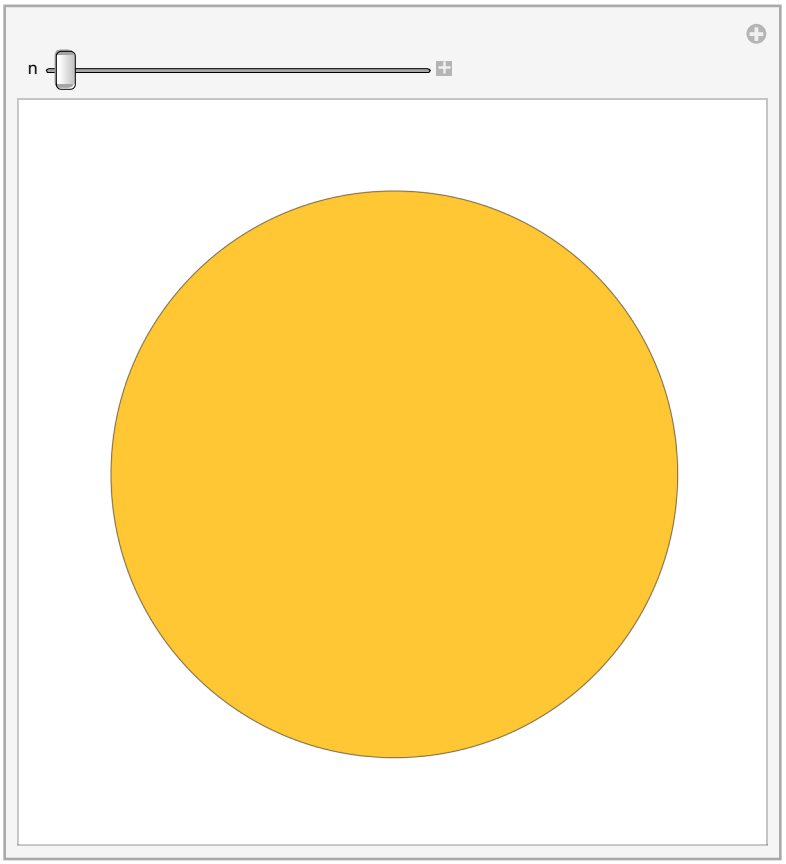
Out[239]=



In[240]:=

```
Manipulate[PieChart[Table[1, n]], {n, 1, 10, 1}]
```

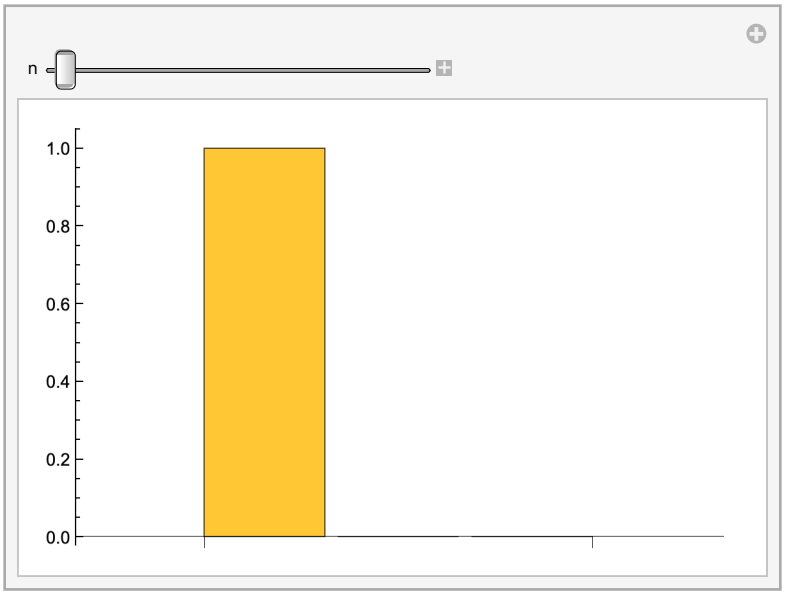
Out[240]=



In[241]:=

```
Manipulate[BarChart[IntegerDigits[n]], {n, 100, 999, 1}]
```

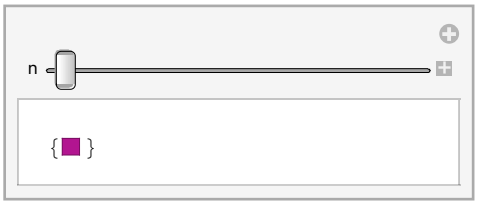
Out[241]=



In[242]:=

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

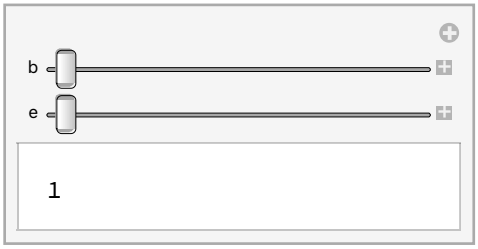
Out[242]=



In[243]:=

```
Manipulate[b^e, {b, 1, 25, 1}, {e, 1, 10, 1}]
```

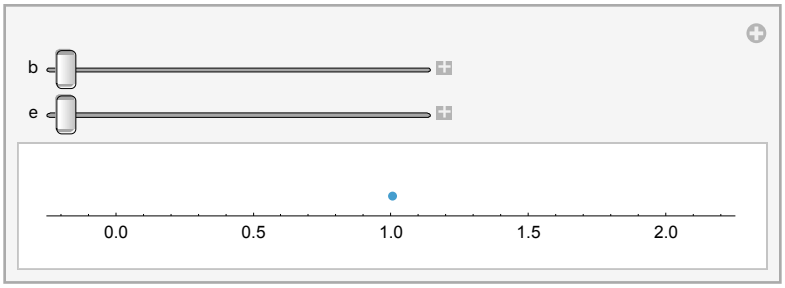
Out[243]=



In[244]:=

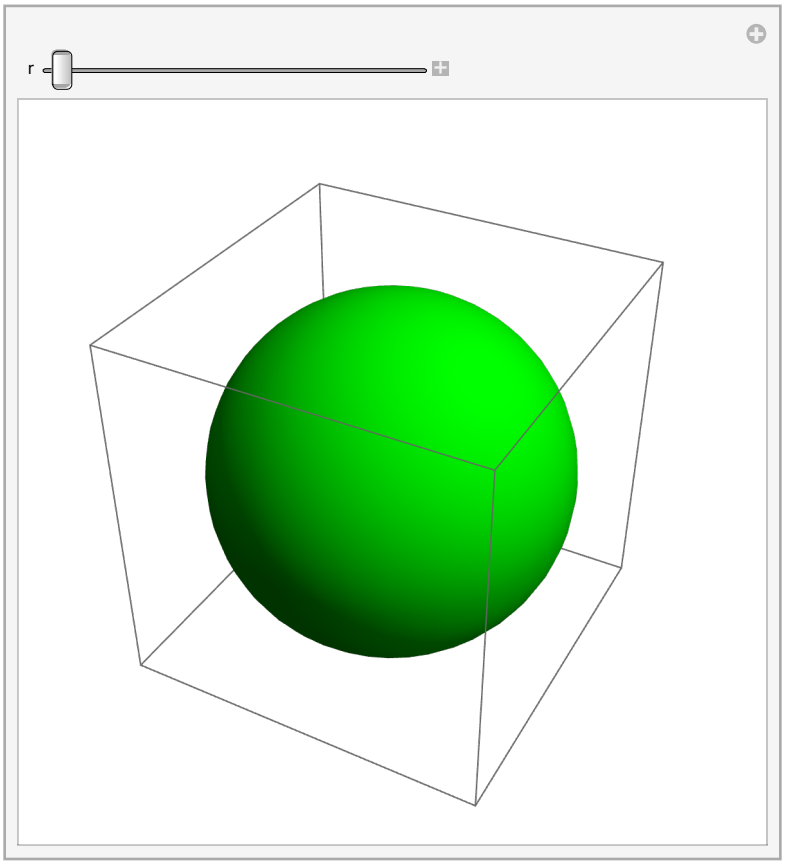
```
Manipulate[NumberLinePlot[Range[b]^e], {b, 1, 10, 1}, {e, 0, 5, 1}]
```

Out[244]=



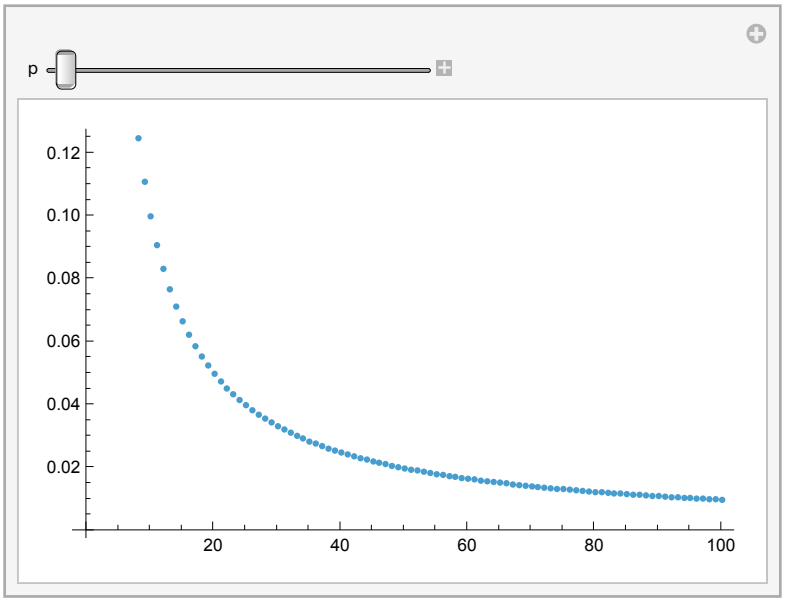
In[245]:=
```
Manipulate[Graphics3D[Style[Sphere[], RGBColor[r, 1 - r, 0]]], {r, 0, 1}]
```

Out[245]=



In[246]:=
```
Manipulate[ListPlot[Range[100]^p], {p, -1, 1}]
```

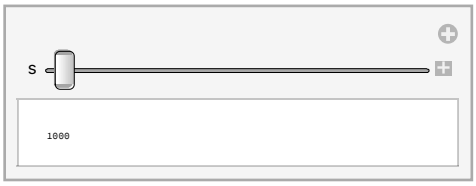
Out[246]=



In[247]:=

```
Manipulate[Style[1000, s], {s, 5, 100, 1}]
```

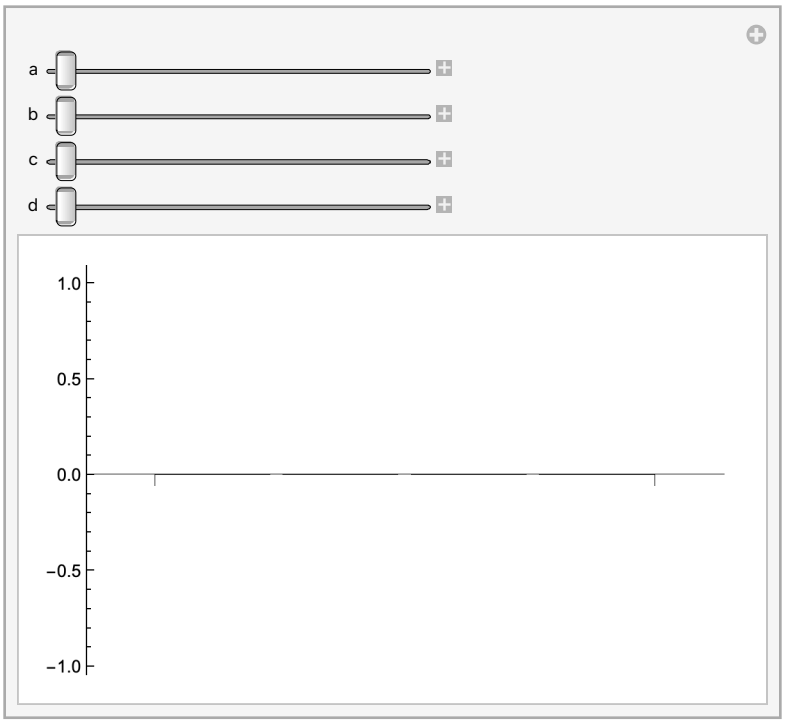
Out[247]=



In[248]:=

```
Manipulate[BarChart[{a, b, c, d}], {a, 0, 10}, {b, 0, 10}, {c, 0, 10}, {d, 0, 10}]
```

Out[248]=

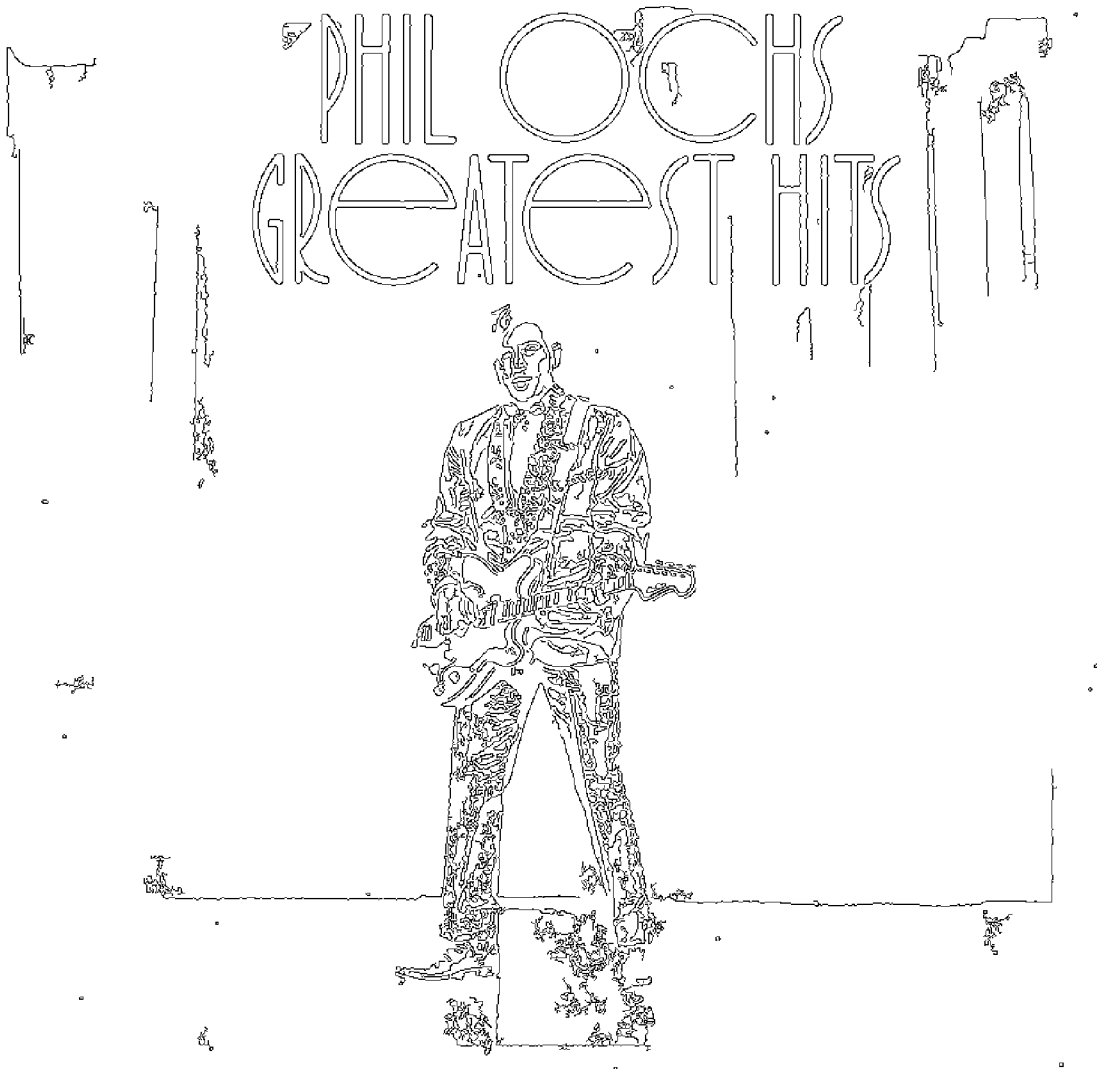


Section 10

In[249]:=

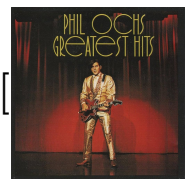
```
ColorNegate[EdgeDetect[ ]]
```

Out[249]=



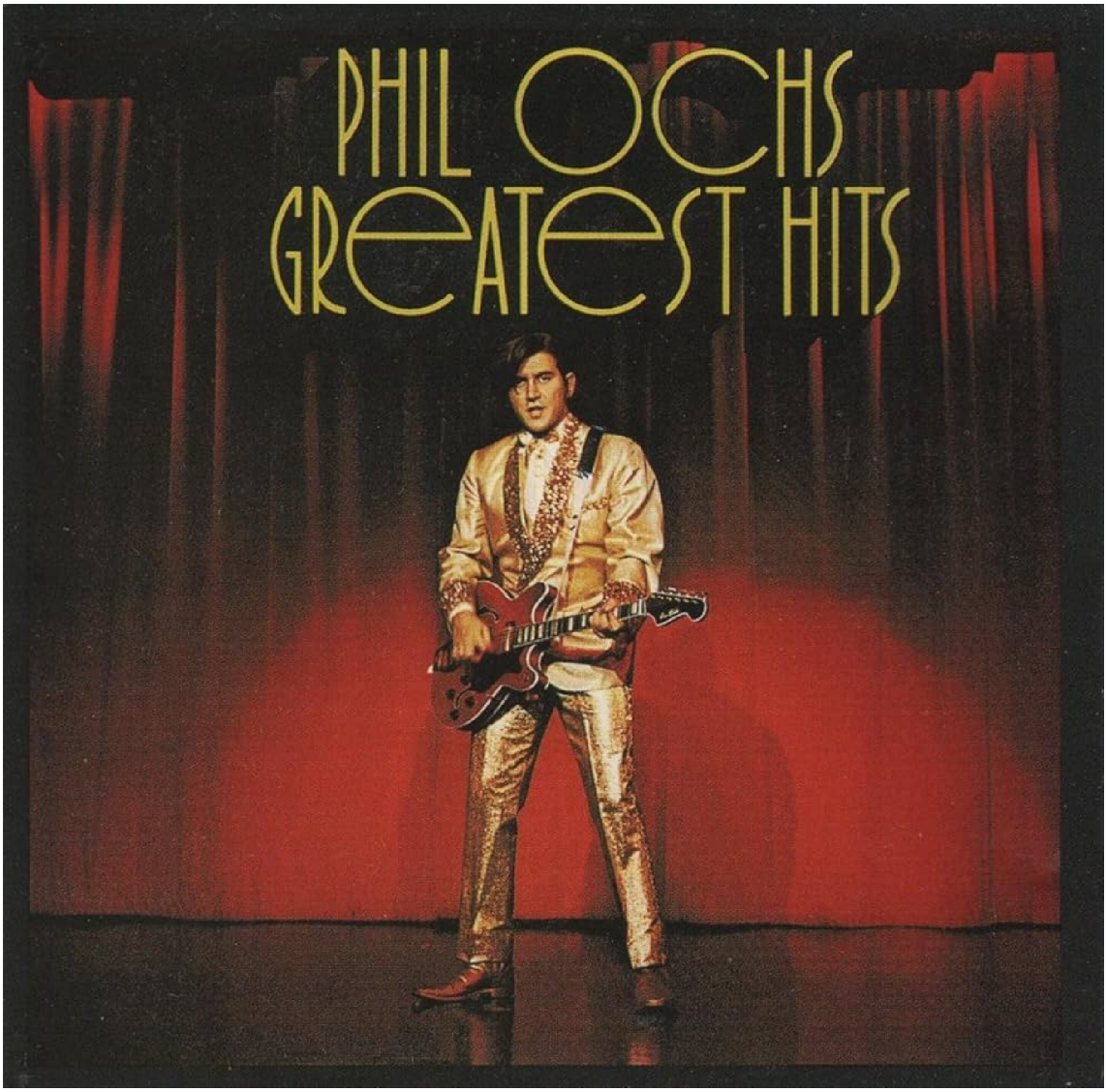
In[250]:=

```
Manipulate[Blur[ , n], {n, 0, 20}]
```



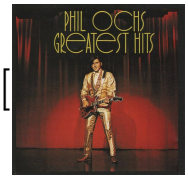
Out[250]=

n



In[251]:=

```
Table[EdgeDetect[Blur[ , n]], {n, 10}]
```



Out[251]=

In[252]:=

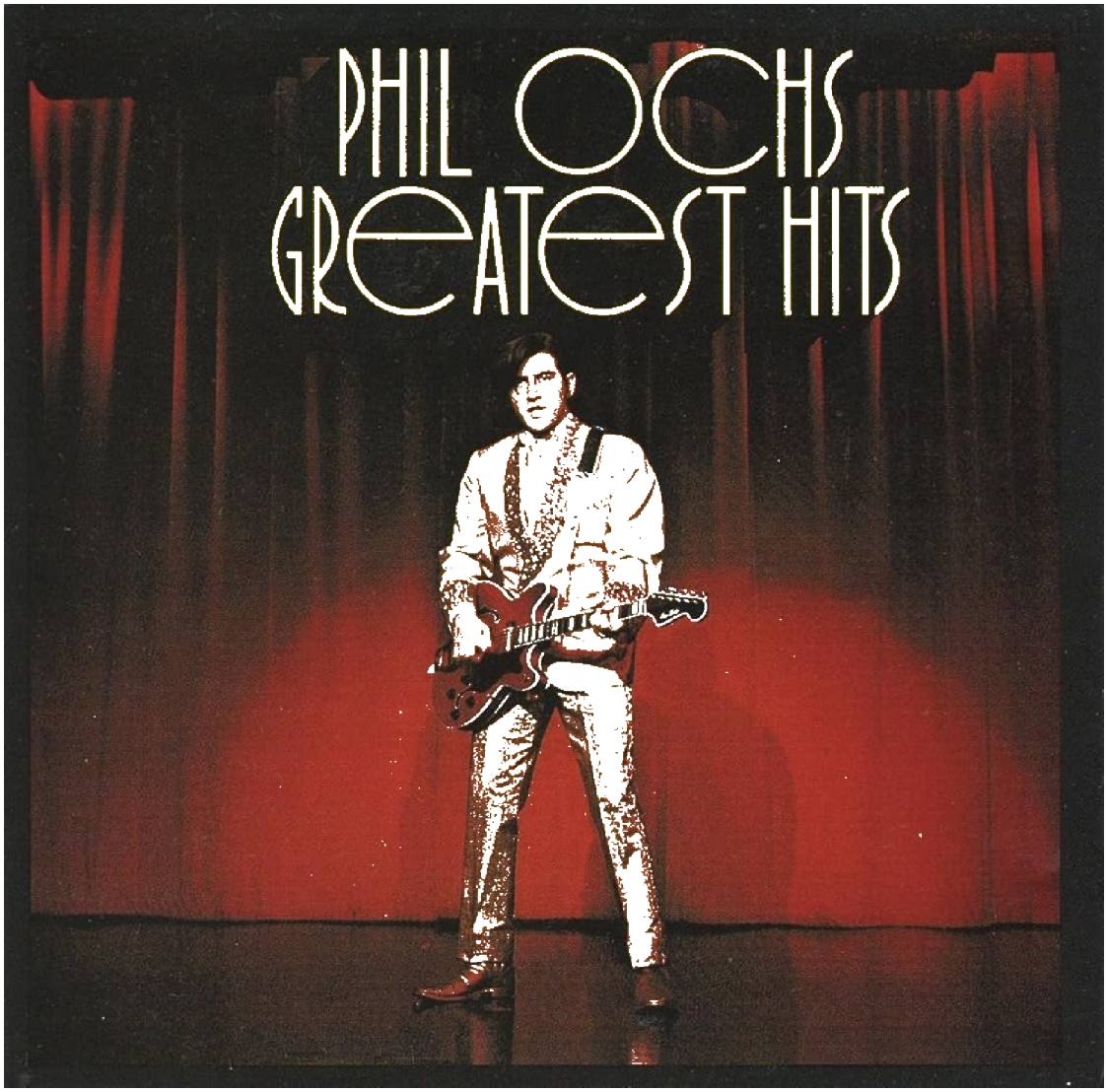
```
ImageCollage[{Blur[ ], EdgeDetect[ ], Binarize[ ]}]
```

Out[252]=

In[253]:=

```
ImageAdd[ , Binarize[ ]]
```

Out[253]=



In[254]:=

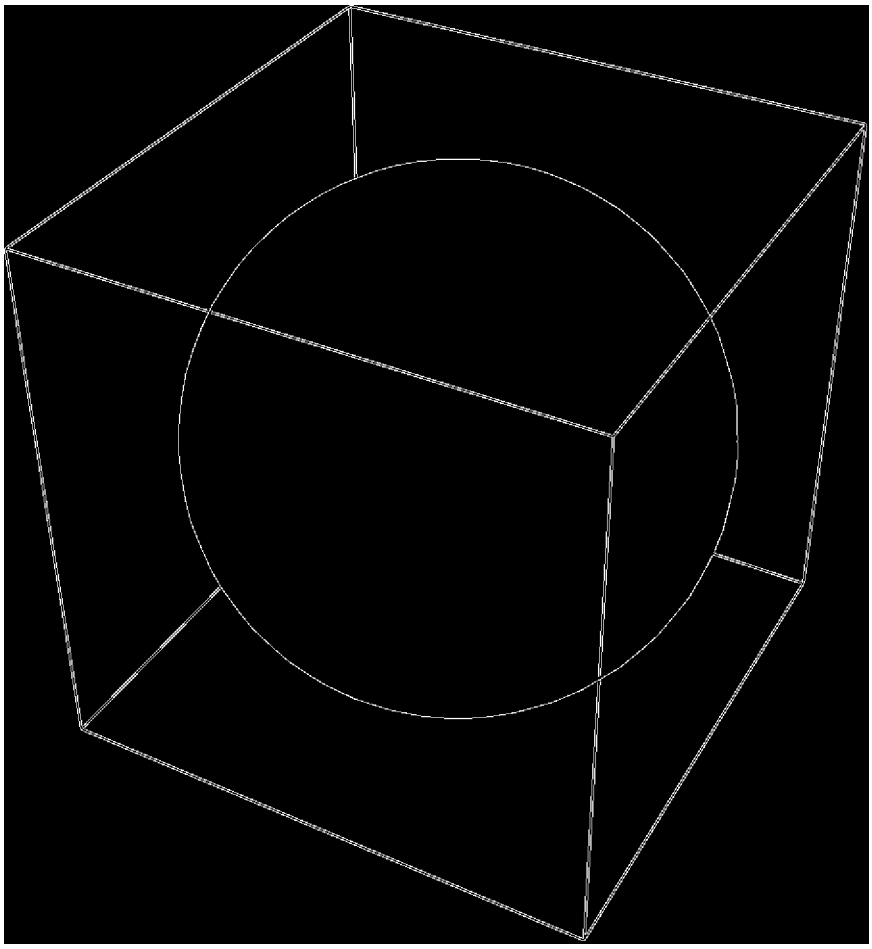
```
Table[EdgeDetect[Blur[ , n]], {n, 1, 10}]
```

Out[254]=

In[255]:=

```
EdgeDetect[Graphics3D[Sphere[]]]
```

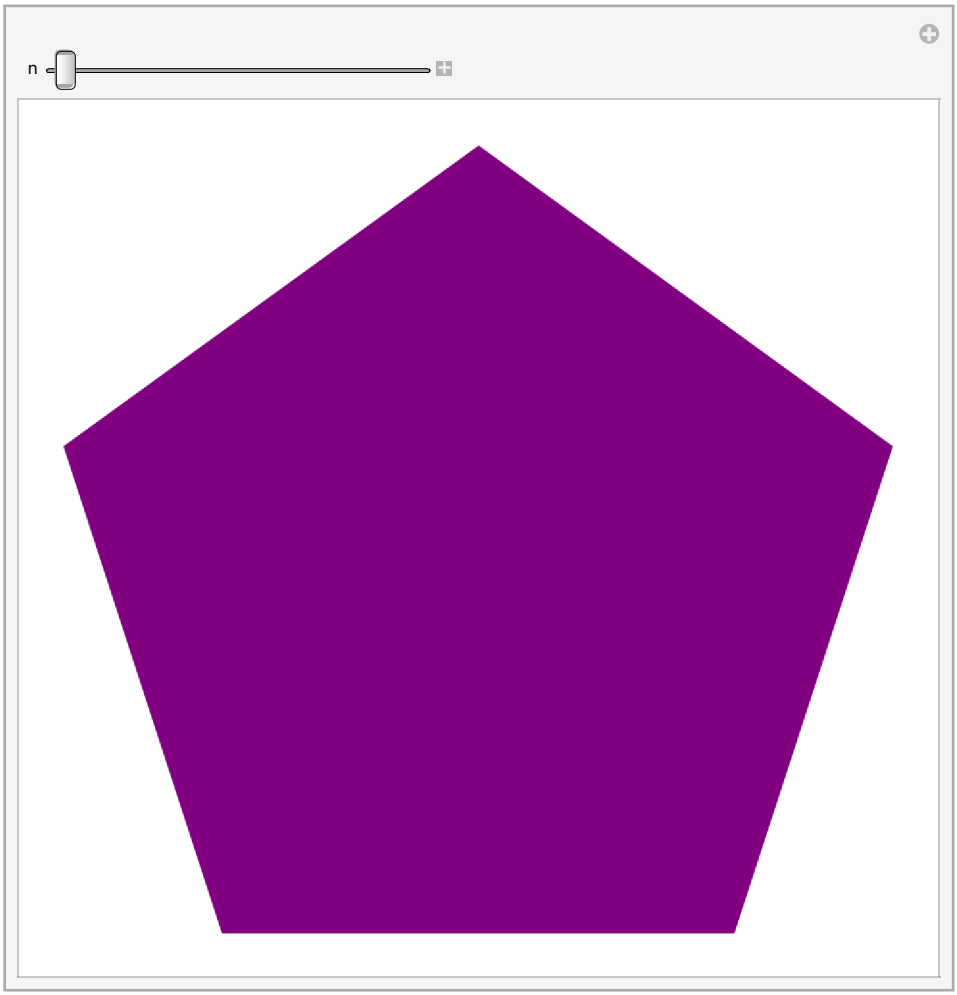
Out[255]=



In[256]:=

```
Manipulate[Blur[Graphics[Style[RegularPolygon[5], Purple]], n], {n, 0, 20}]
```

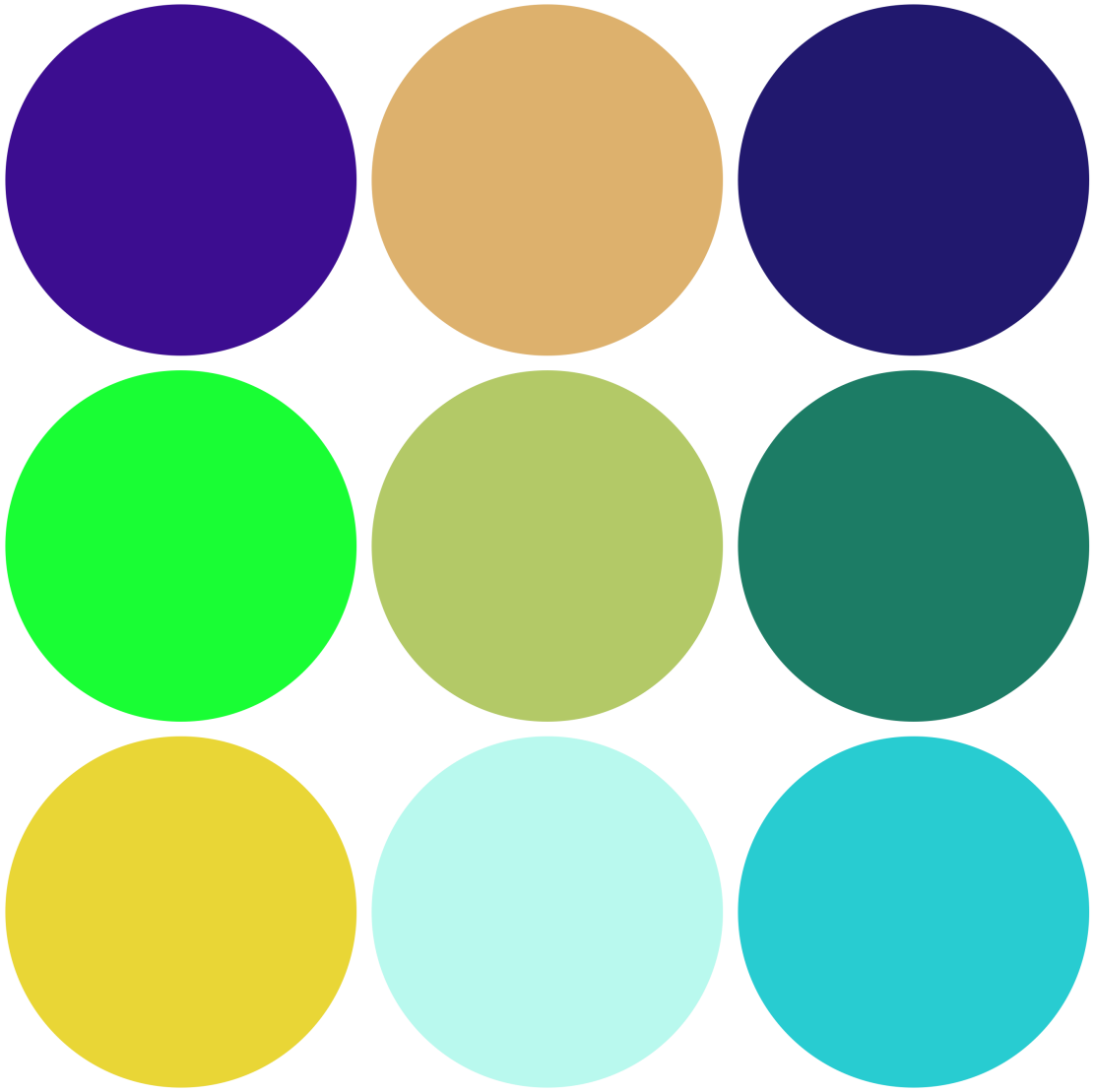
Out[256]=



In[257]:=

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

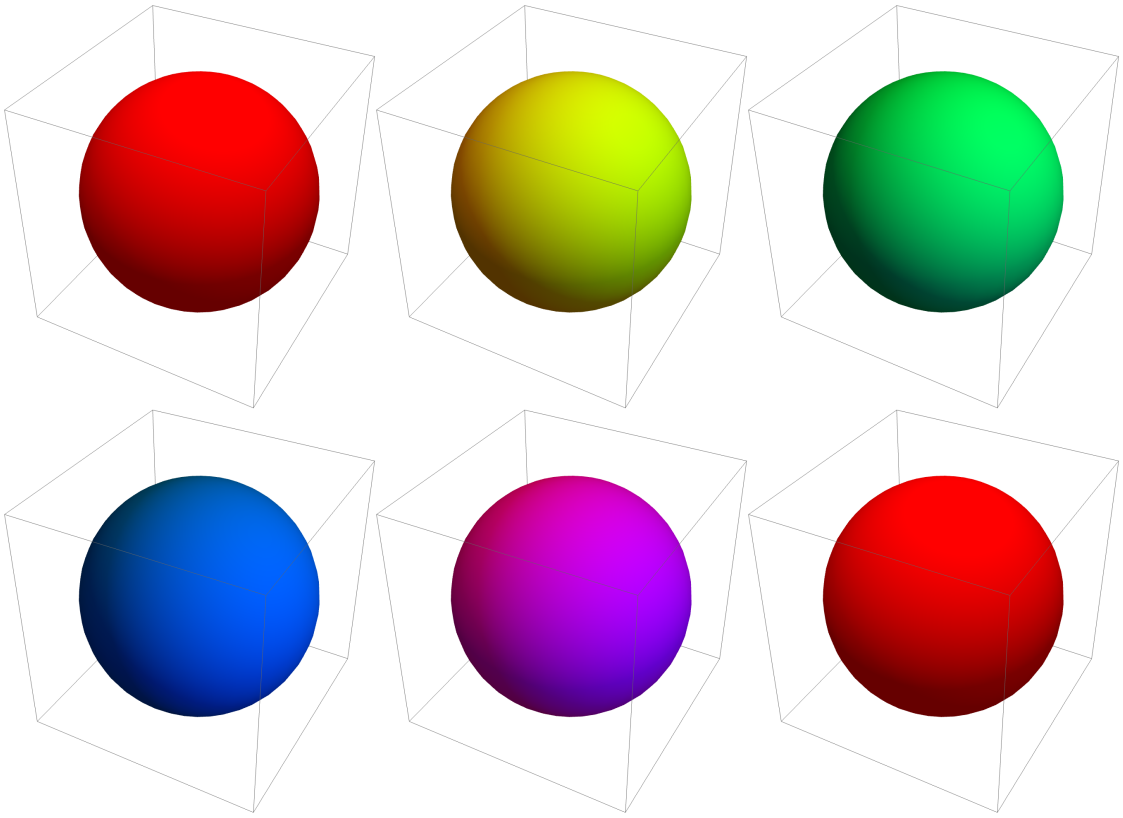
Out[257]=



In[258]:=

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

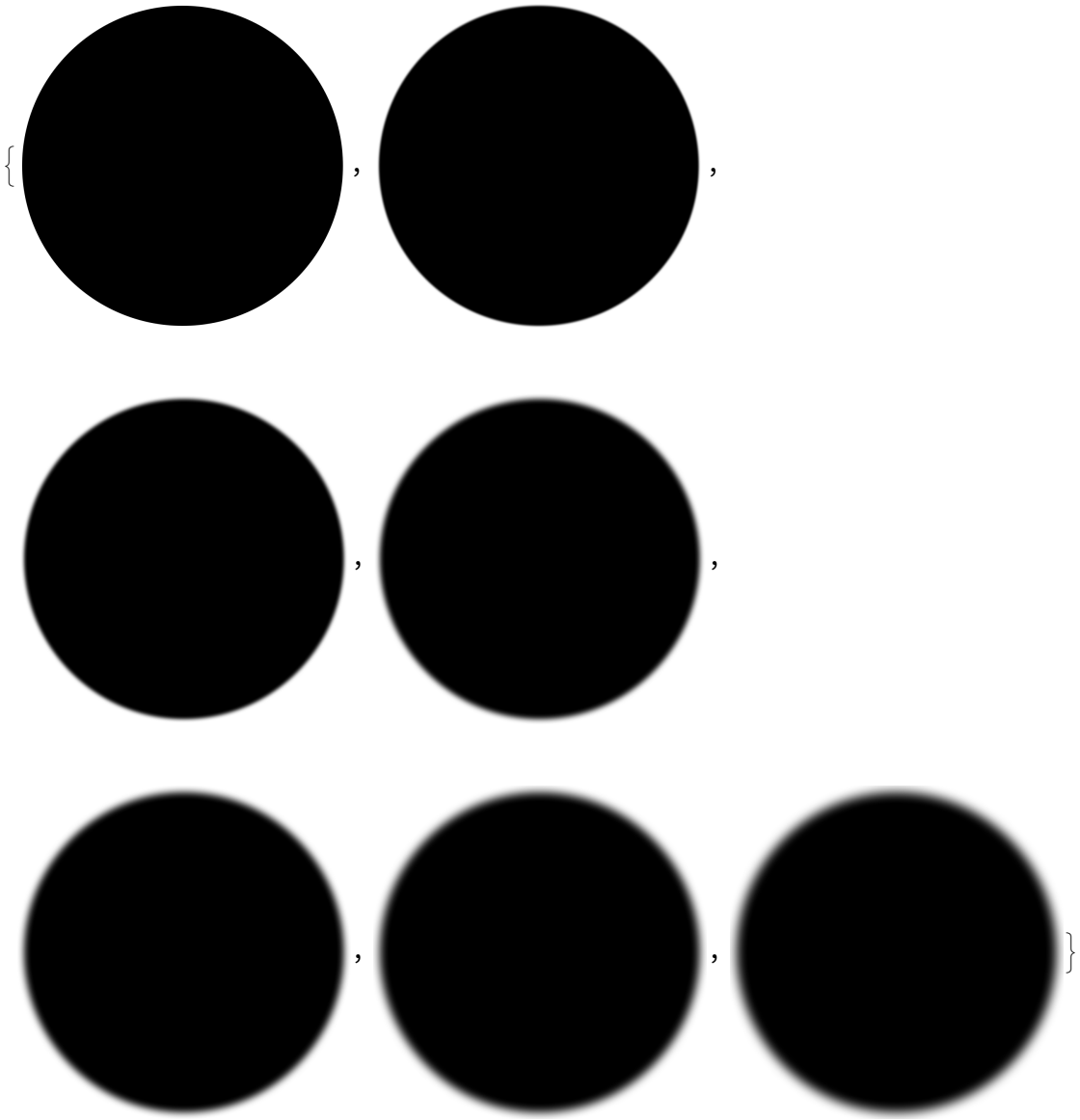
Out[258]=



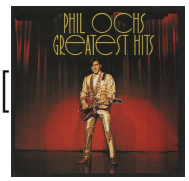
In[259]:=

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

Out[259]=



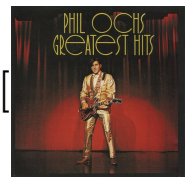
In[260]:=

```
ImageAdd[ 

, Graphics[Disk[]]]
```

Out[260]=

In[261]:=

```
ImageAdd[ 

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

Out[261]=

In[262]:=

```
ImageAdd[ , ColorNegate[EdgeDetect[ ]]]
```

Out[262]=

Section 11 - 11.1-11.15

In[263]:=

```
StringJoin["Hello", "Hello"]
```

Out[263]=

```
HelloHello
```

In[264]:=
```
ToUpperCase[StringJoin[Alphabet[]]]
```
Out[264]=
```
ABCDEFGHIJKLMNOPQRSTUVWXYZ
```

In[265]:=
```
StringJoin[Reverse[Alphabet[]]]
```
Out[265]=
```
zyxwvutsrqponmlkjihgfedcba
```

In[266]:=
```
StringJoin[Table["AGCT", 100]]
```
Out[266]=
```
AGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTA≫
    GCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGC≫
    TAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTA≫
    GCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGC≫
    TAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTA≫
    GCTAGCT
```

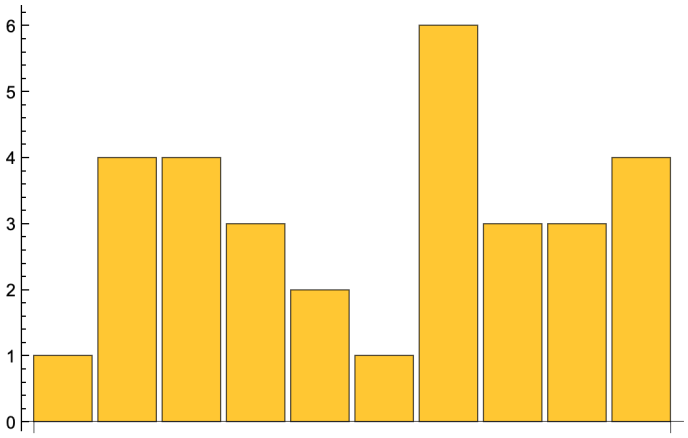
In[267]:=
```
StringTake[StringJoin[Alphabet[]], 6]
```
Out[267]=
```
abcdef
```

In[268]:=
```
Column[Table[StringTake["this is about strings.", n], {n, 22}]]
```
Out[268]=
```
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
this is about strings.
```

In[269]:=

In[270]:=
```
BarChart[StringLength[TextWords["A long time ago, in a galaxy far, far away."]]]
```

Out[270]=



In[271]:=
```
StringLength[WikipediaData["computers"]]
```

Out[271]=
```
60 266
```

In[272]:=
```
First[TextSentences[WikipediaData["strings"]]]
```

Out[272]=
```
String or strings may refer to:
```

In[273]:=
```
StringJoin[StringTake[TextSentences[WikipediaData["computers"]], 1]]
```

Out[273]=
```
AMTTACCESEMTTTCTPP=ITTDBTTTT==DTLTTTSITIIDMTTAAATTTIASIBIAITITIITSI=CCAHTFTTTAEBNH
  =ITax()2{,THI=DHTTTTAB==CBTDETTITIRTZTT=PTEITDTTHACIINCTLOTIIIHBT==TTHTVTE=
  ECWATIHJTIIAATBAIL=TJFCJTHATHTTWITT=TTDTKIHKNNHPNIMTGFTTWISTITS=TTLTTTT=C=A=SH=
  TC==ATIET=WTTSC=TSC=TCATRDIRTPIWJSAIT=TES=TTSHTALTSG=
  AETTLSIETWOAMTTRACrRIIISFIIG=IDOHCIAMA=WTOBItSTBSIT=SMSTSS=SSCICW=T=TTMIAL=
  TITHTFMPWSTCBOTOI=ITTSTTITMWITC=PUTTS=MF=ATHHIT=PALTP=ETHOBSA=CTITTITCITA"=AWA=
  TMH=TQCVSLTTT=ACARPE=AT=====M
```

In[274]:=
```
Max[StringLength[WordList[]]]
```

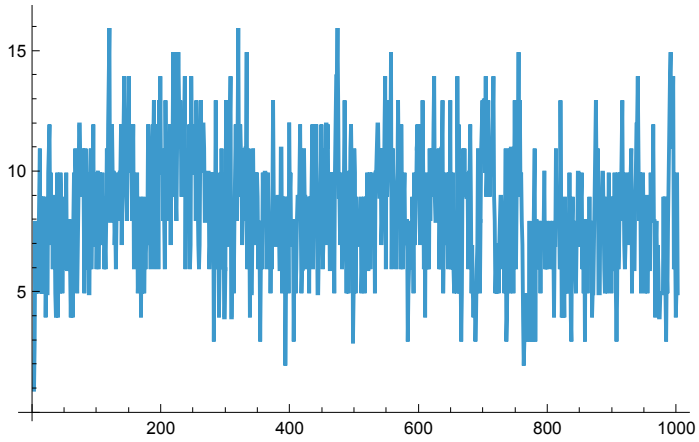
Out[274]=
```
23
```

In[275]:=
```
Count[StringTake[WordList[], 1], "q"]
```

Out[275]=
```
194
```

In[276]:=
```
ListLinePlot[Take[StringLength[WordList[]], 1000]]
```

Out[276]=



In[277]:=
```
WordCloud[StringTake[WordList[], 1]]
```

Out[277]=