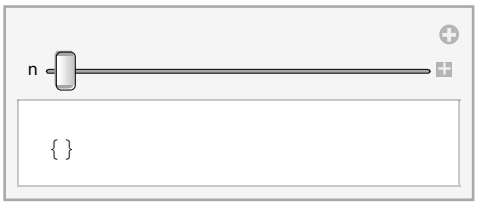
Jeremy — PS 3 — 2025-01-24

EIWL3 Section 9 Questions

In[194]:=

```
Manipulate[Range[n], {n, 0, 100}]
```

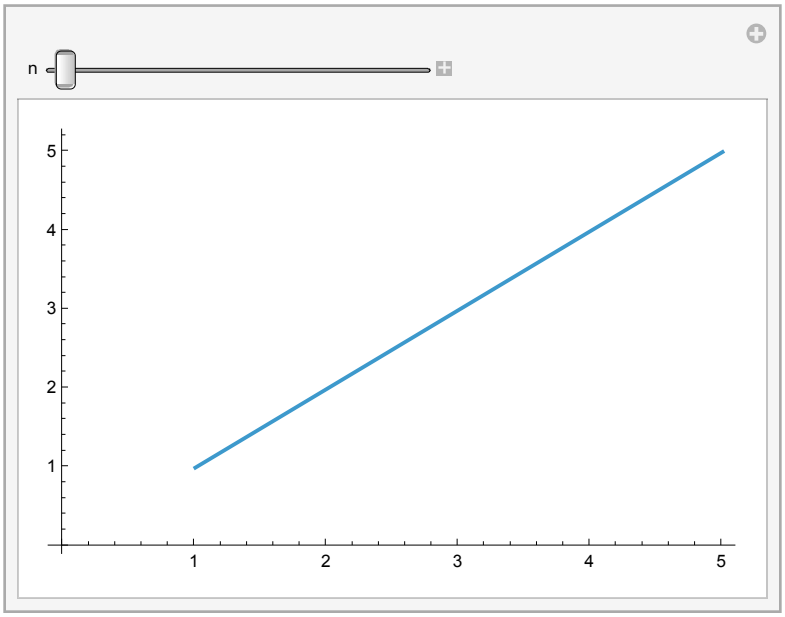
Out[194]=



In[195]:=

```
Manipulate[ListLinePlot[Range[n]], {n, 5, 100, 1}]
```

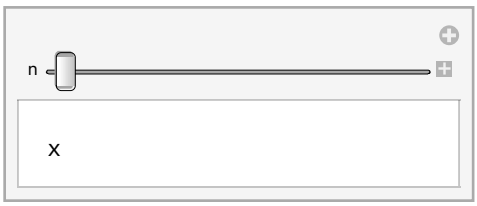
Out[195]=



In[196]:=

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

Out[196]=



EdgeDetect isn't working as expected on the smiley image you chose. See pp. 8 and 14.

Otherwise looks good.

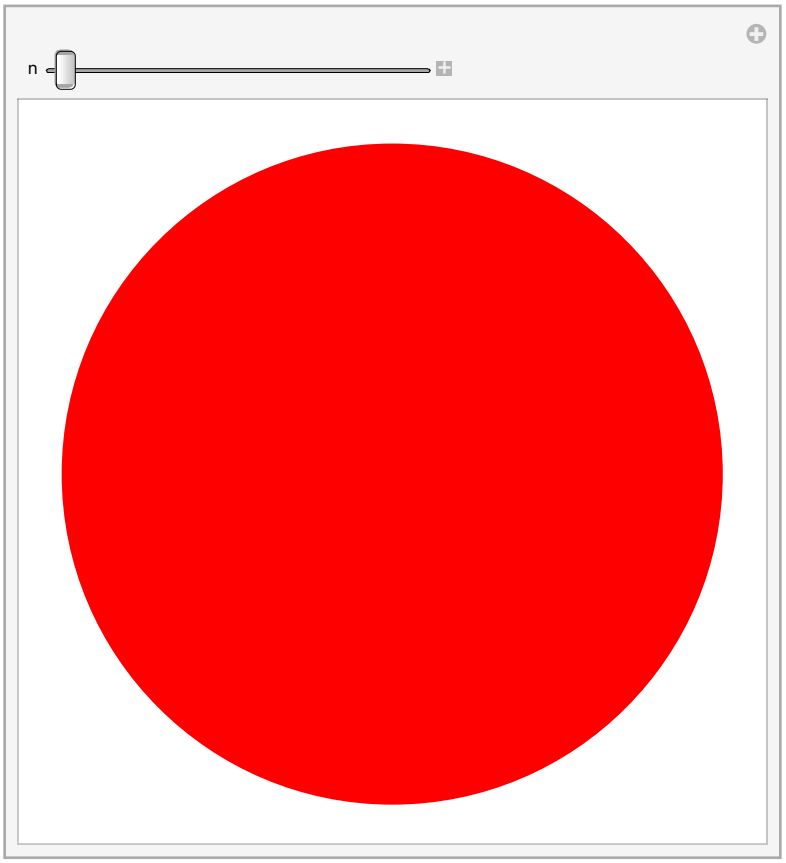
10/10

He might have been looking a NumberLinePlot rather than a ListLinePlot. At least that was my interpretation.

In[197]:=

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

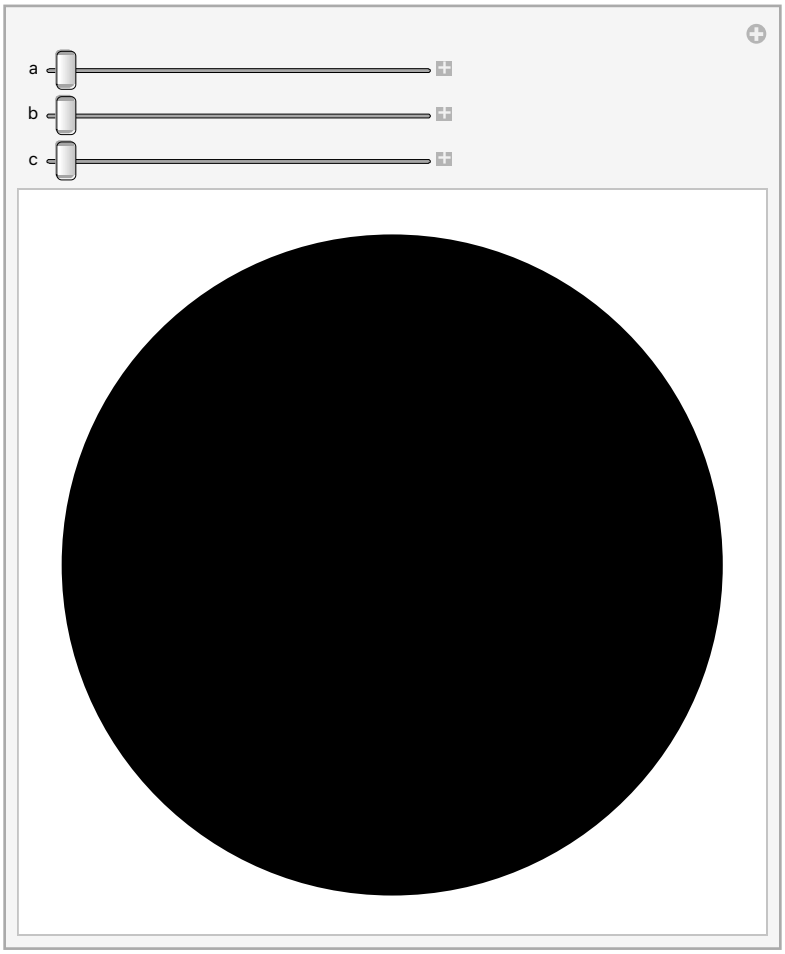
Out[197]=



In[198]:=

```
Manipulate[Graphics[Style[Disk[], RGBColor[a, b, c]]], {a, 0, 1}, {b, 0, 1}, {c, 0, 1}]
```

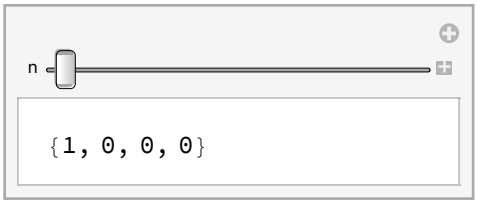
Out[198]=



In[199]:=

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

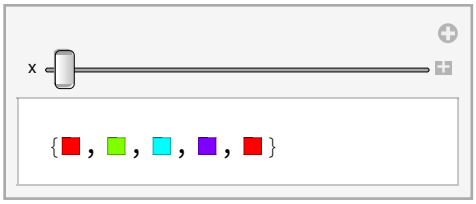
Out[199]=



In[200]:=

```
Manipulate[Table[Hue[n], {n, 0, 1, 1 / x}], {x, 4, 49}]
```

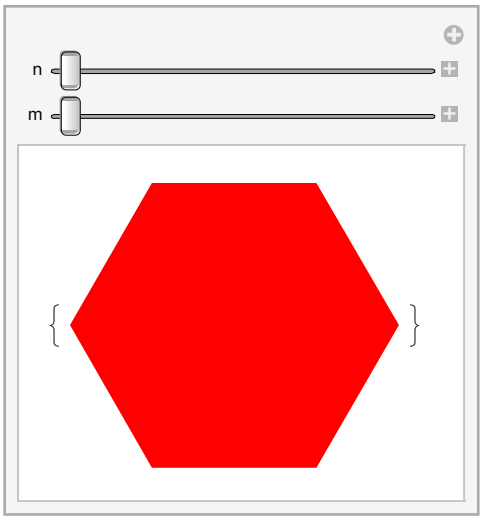
Out[200]=



In[201]:=

```
Manipulate[Table[Graphics[Style[RegularPolygon[6], Hue[n]]], m],
 {n, 0, 1}, {m, 1, 10}]
```

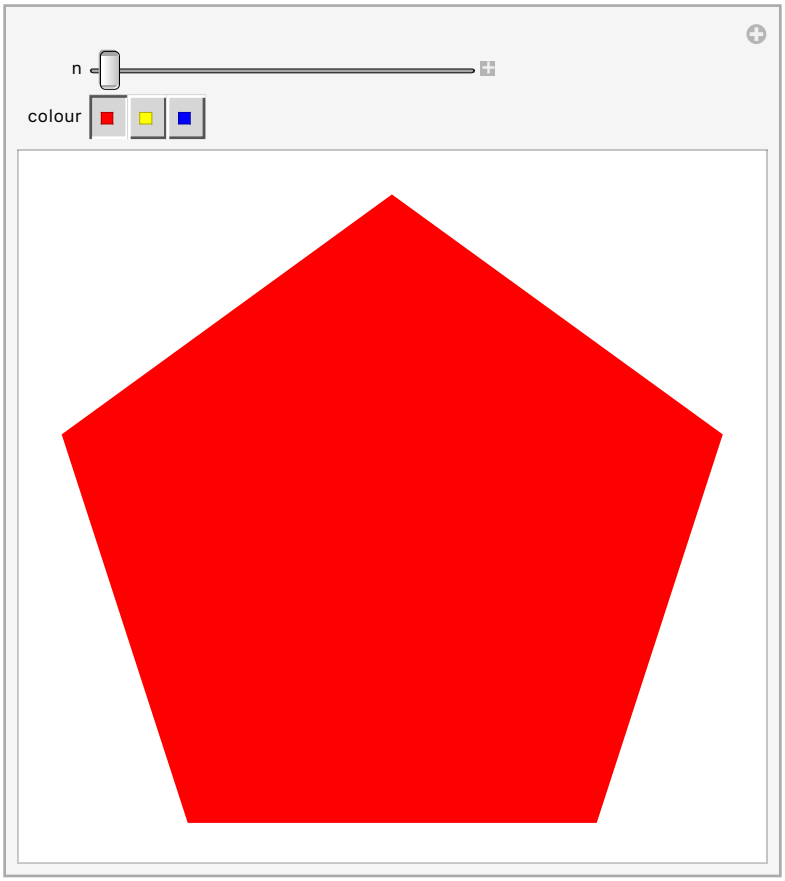
Out[201]=



In[202]:=

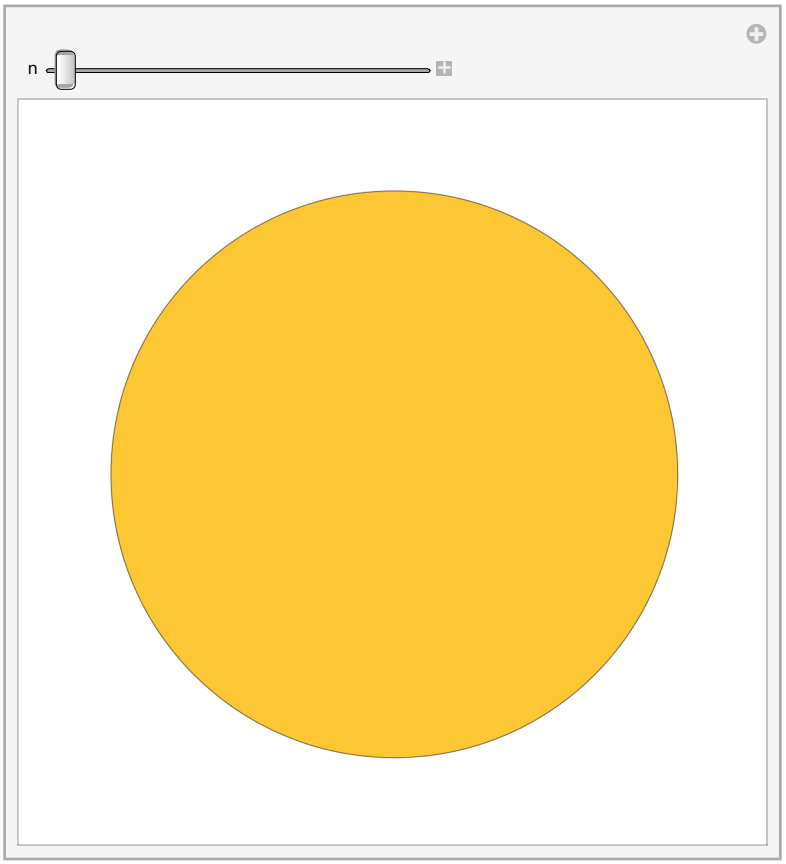
```
Manipulate[Graphics[Style[RegularPolygon[n], colour]],
 {n, 5, 20}, {colour, {Red, Yellow, Blue}}]
```

Out[202]=



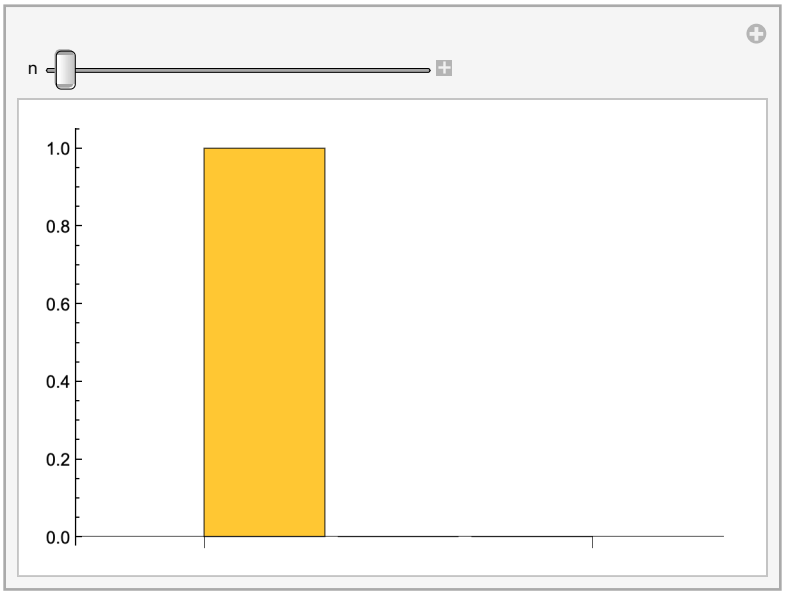
In[203]:=
```
Manipulate[PieChart[Table[1, n]], {n, 1, 10}]
```

Out[203]=



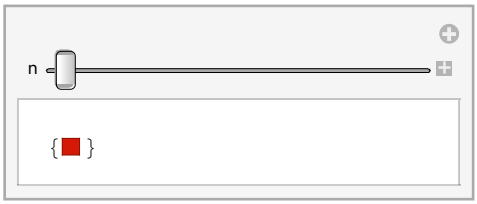
In[204]:=
```
Manipulate[BarChart[IntegerDigits[n]], {n, 100, 999, 1}]
```

Out[204]=



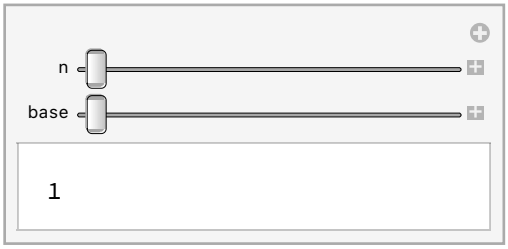
In[205]:=
```
Manipulate[Table[RandomColor[], n], {n, 1, 50}]
```

Out[205]=



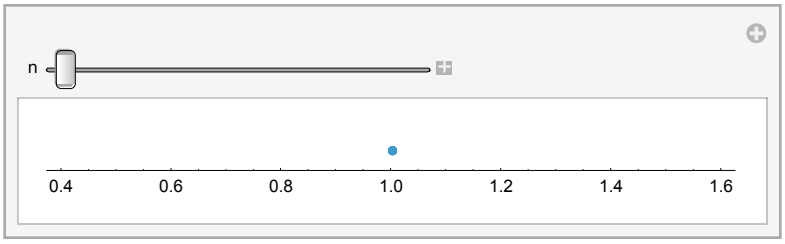
In[206]:=
```
Manipulate[Column[Table[base^a, {a, 1, n, 1}]], {n, 1, 10, 1}, {base, 1, 25, 1}]
```

Out[206]=



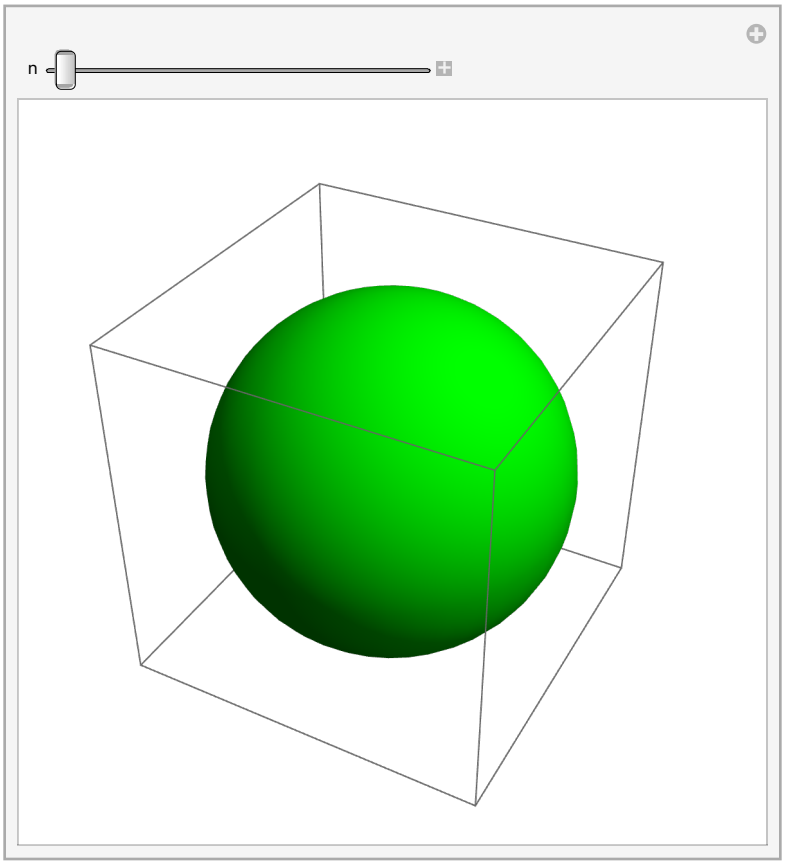
In[207]:=
```
Manipulate[NumberLinePlot[Table[x^n, {x, 10}]], {n, 0, 5}]
```

Out[207]=



In[208]:=
```
Manipulate[Graphics3D[Style[Sphere[], RGBColor[n, 1 - n, 0]]], {n, 0, 1}]
```

Out[208]=



EIWL3 Section 10 Questions

In[209]:=
```
ColorNegate[EdgeDetect[ ]]
```

Out[209]=

In[210]:=
```
Manipulate[Blur[ , n], {n, 0, 20}]
```

Out[210]=

In[211]:=

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

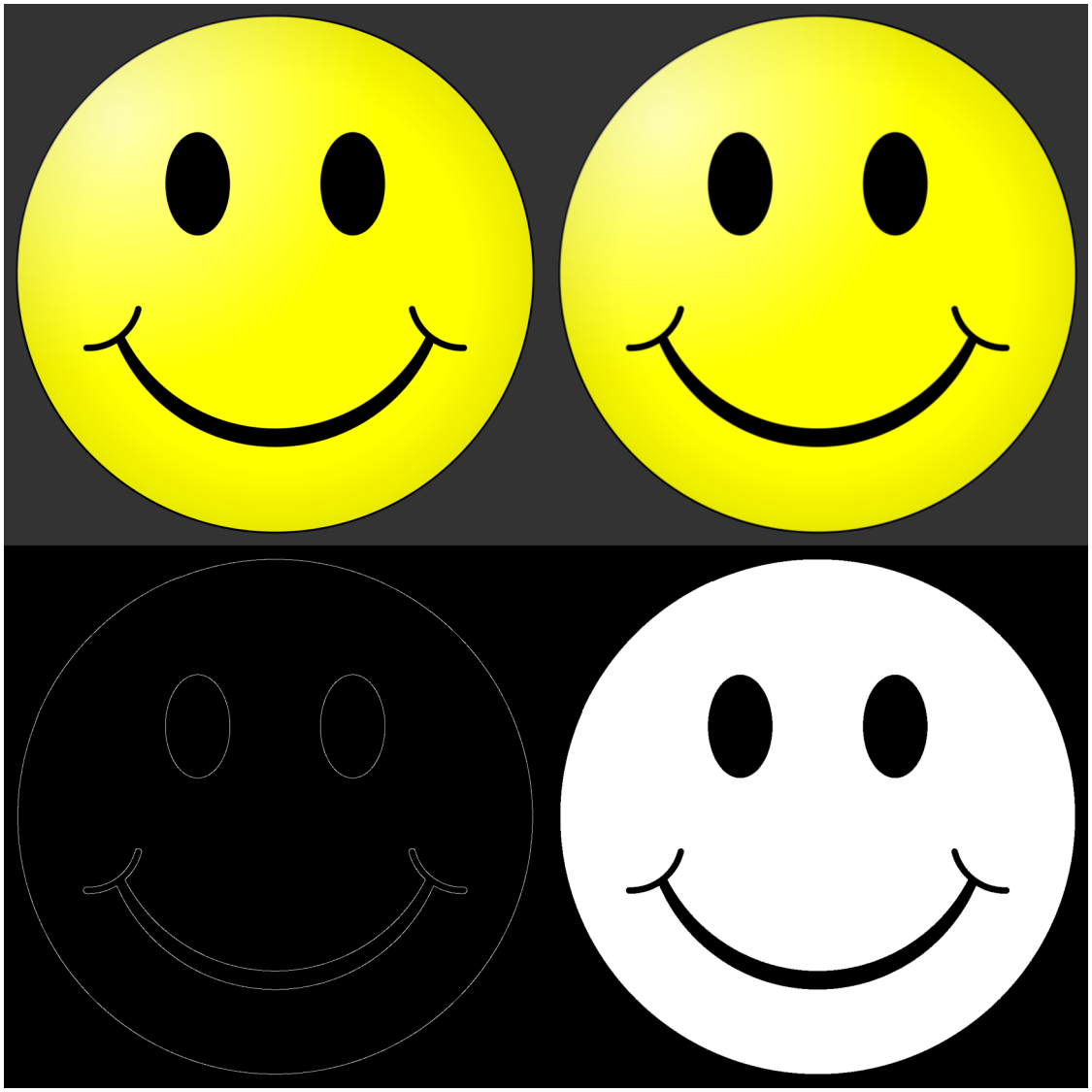
Code looks right, but this table didn't work as expected. Not sure why.

Out[211]=

In[212]:=

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

Out[212]=



In[213]:=

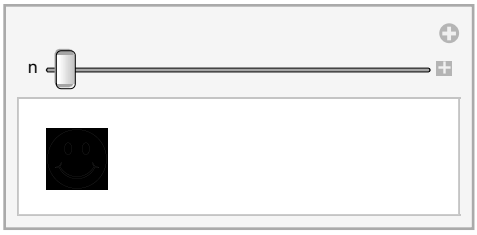
```
ImageAdd[Binarize[], ]
```

Out[213]=

In[214]:=

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

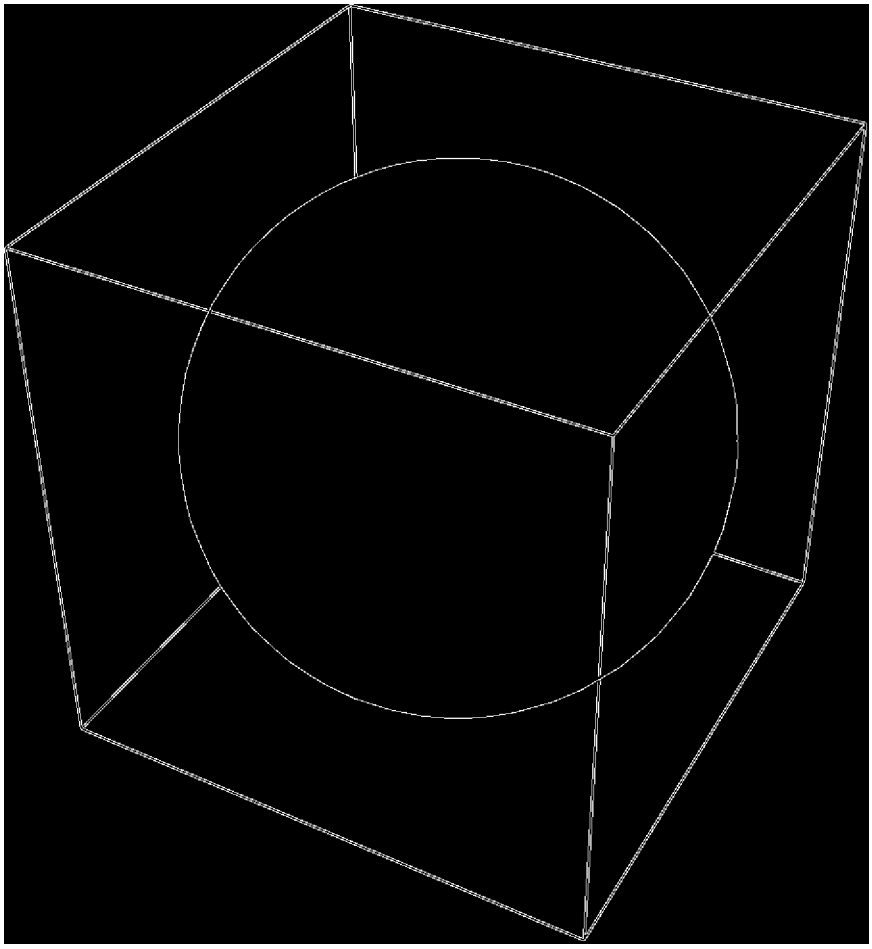
Out[214]=



In[215]:=

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

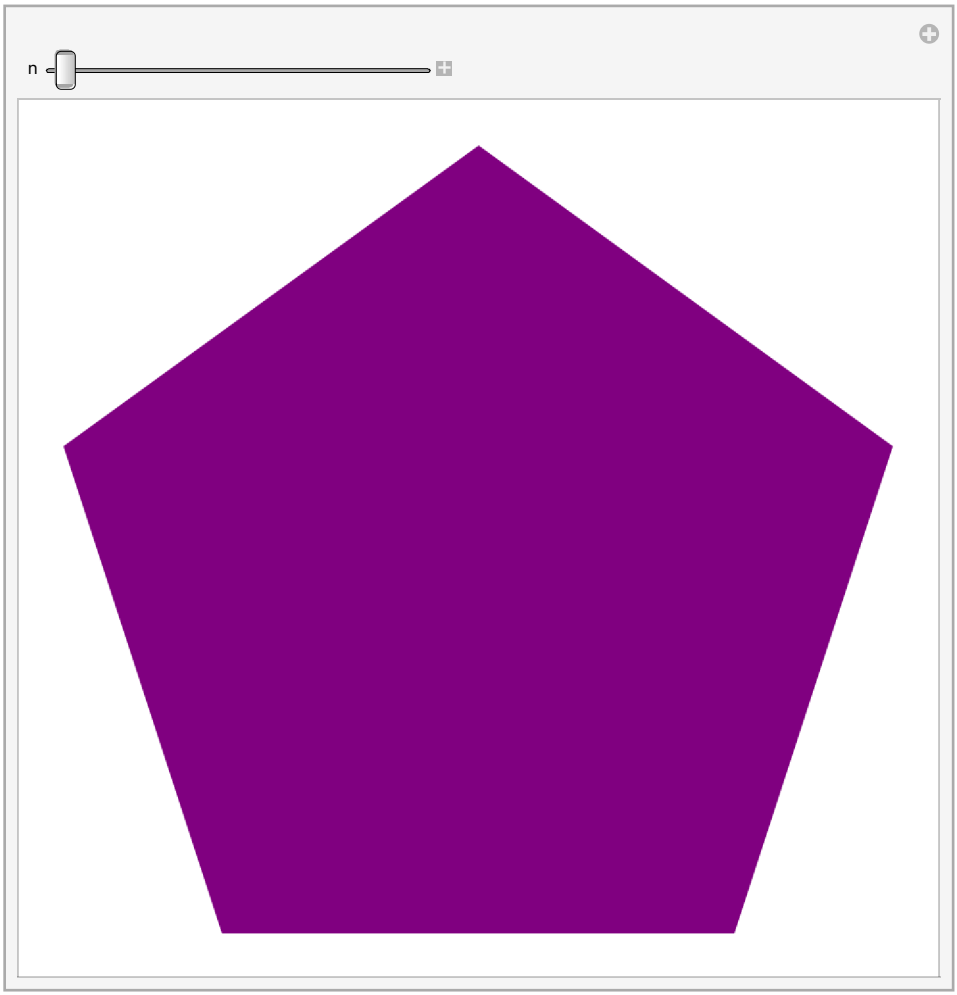
Out[215]=



In[216]:=

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

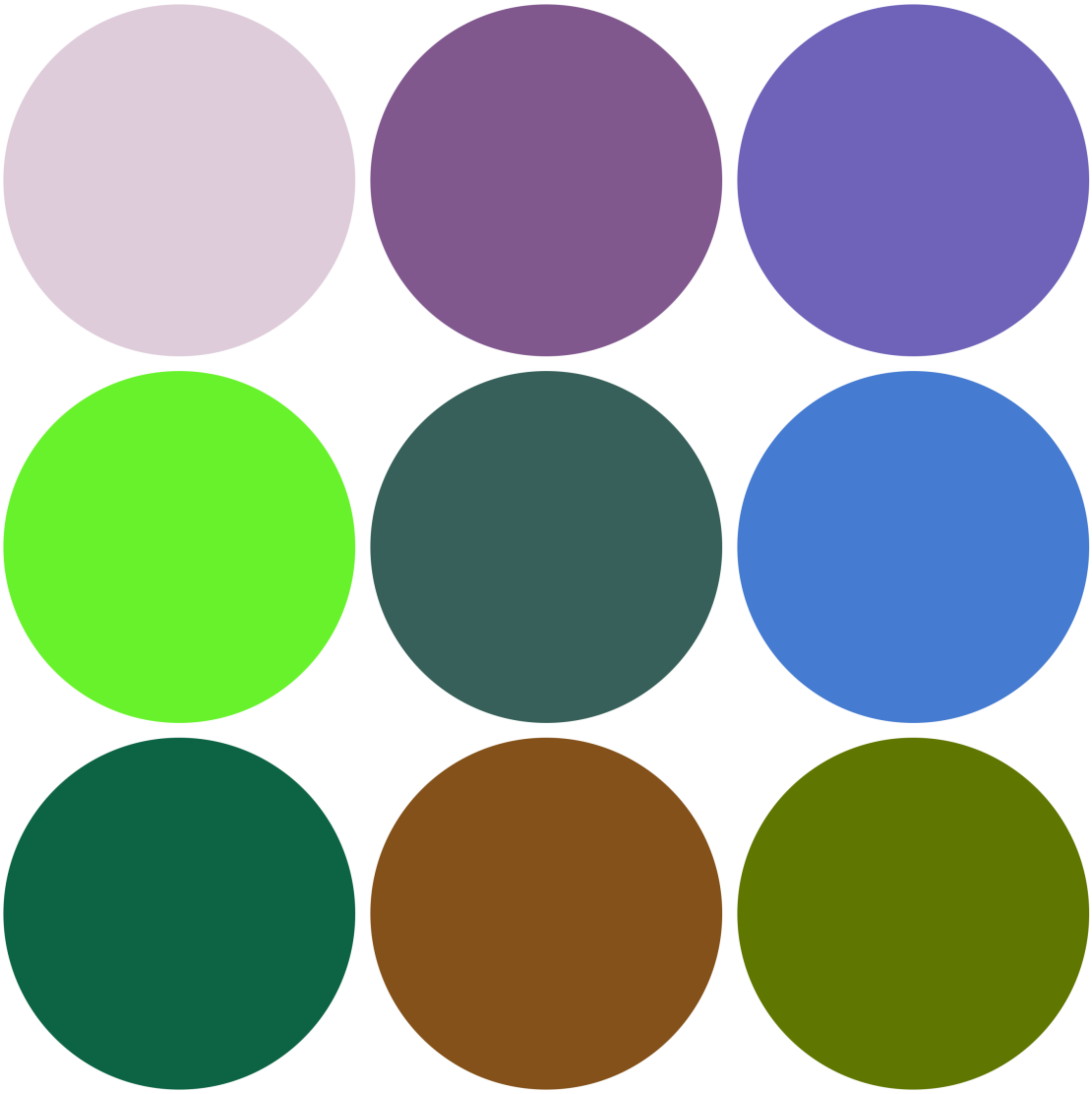
Out[216]=



In[217]:=

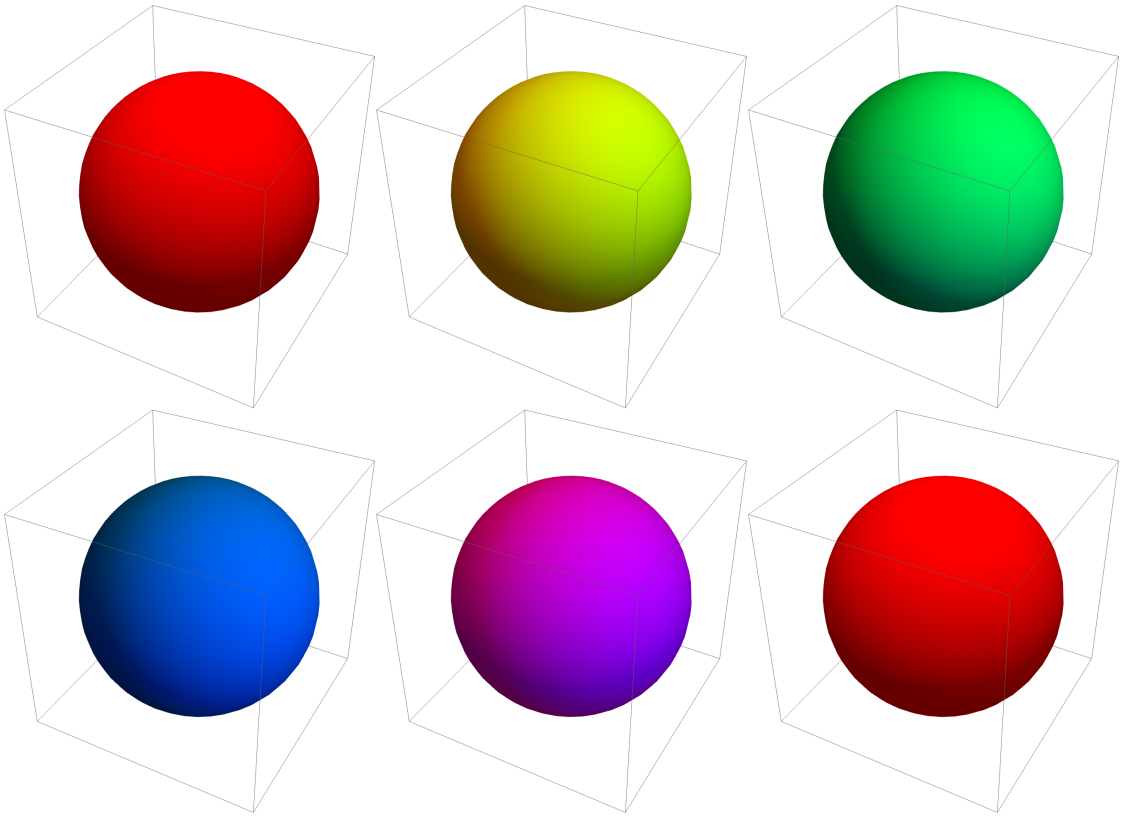
```
ImageCollage[Table[Graphics[Style[Disk[], RandomColor[]]], 9]]
```

Out[217]=



In[218]:=
```
ImageCollage[Table[Graphics3D[Style[Sphere[], Hue[n]]], {n, 0, 1, 0.2}]]
```

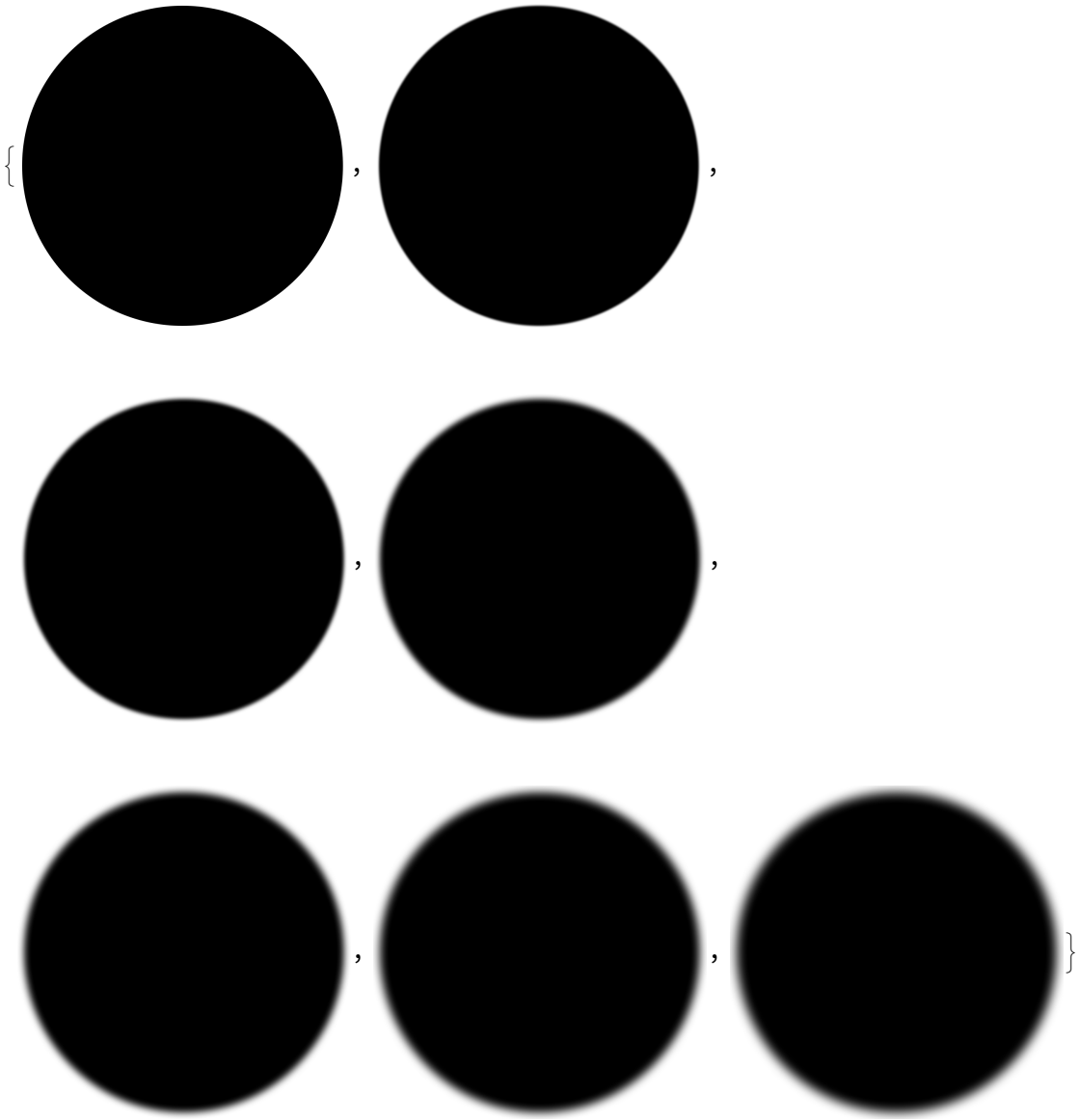
Out[218]=



In[219]:=

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

Out[219]=



In[220]:=

```
ImageAdd[, Graphics[Disk[]]]
```

Out[220]=

In[221]:=

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

Out[221]=

In[222]:=
```
ImageAdd[, ColorNegate[EdgeDetect[]]]
```

Out[222]=

This one also didn't work as expected.
For some reason, no edges are being found.

EIWL3 Section 11 Questions

In[223]:=
```
StringJoin["Hello", "Hello"]
```

Out[223]=
```
HelloHello
```

In[224]:=
```
ToUpperCase[StringJoin[Alphabet[]]]
```

Out[224]=
```
ABCDEFGHIJKLMNOPQRSTUVWXYZ
```

In[225]:=
```
StringReverse[StringJoin[Alphabet[]]]
```

Out[225]=
```
zyxwvutsrqponmlkjihgfedcba
```

In[226]:=
```
StringJoin[Table["AGCT", 100]]
```

Out[226]=
```
AGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTA∗
   GCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGC∗
   TAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTA∗
   GCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGC∗
   TAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTA∗
   GCTAGCT
```

In[227]:=
```
StringTake[StringJoin[Alphabet[]], 6]
```

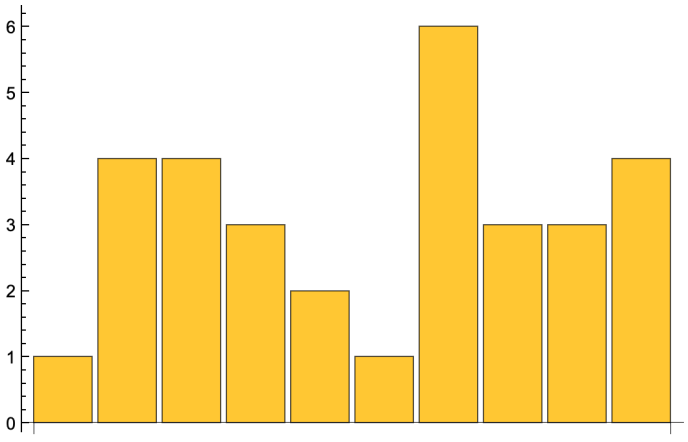
Out[227]=
```
abcdef
```

In[228]:=
```
Column[Table[StringTake["this is about strings", n],
  {n, StringLength["this is about strings"]}]]
```

Out[228]=
```
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[229]:=
```
BarChart[StringLength[TextWords["A long time ago, in a galaxy far, far away"]]]
```

Out[229]=



In[230]:=
```
StringLength[WikipediaData["computer"]]
```

Out[230]=
```
60 266
```

In[231]:=
```
Length[TextWords[WikipediaData["computer"]]]
```

Out[231]=
```
9271
```

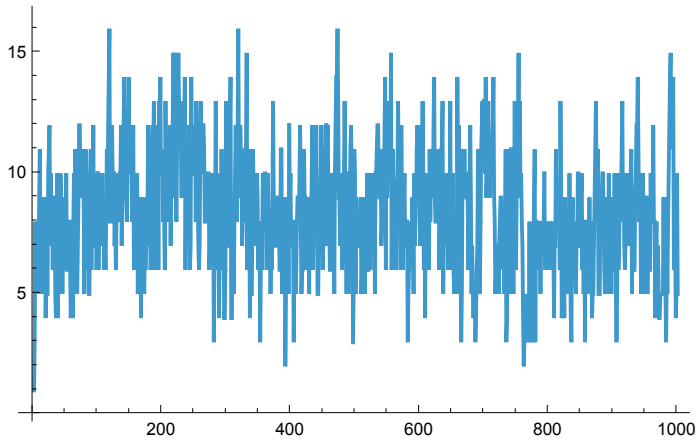
In[232]:=
```
Take[TextSentences[WikipediaData["strings"]], 1]
```
Out[232]=
```
{String or strings may refer to:}
```

In[233]:=
```
StringJoin[StringTake[TextSentences[WikipediaData["computers"]], 1]]
```
Out[233]=
```
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[234]:=
```
Last[Sort[StringLength[WordList[]]]]
```
Out[234]=
```
23
```

In[235]:=
```
Count[StringTake[WordList[], 1], "q"]
```
Out[235]=
```
194
```

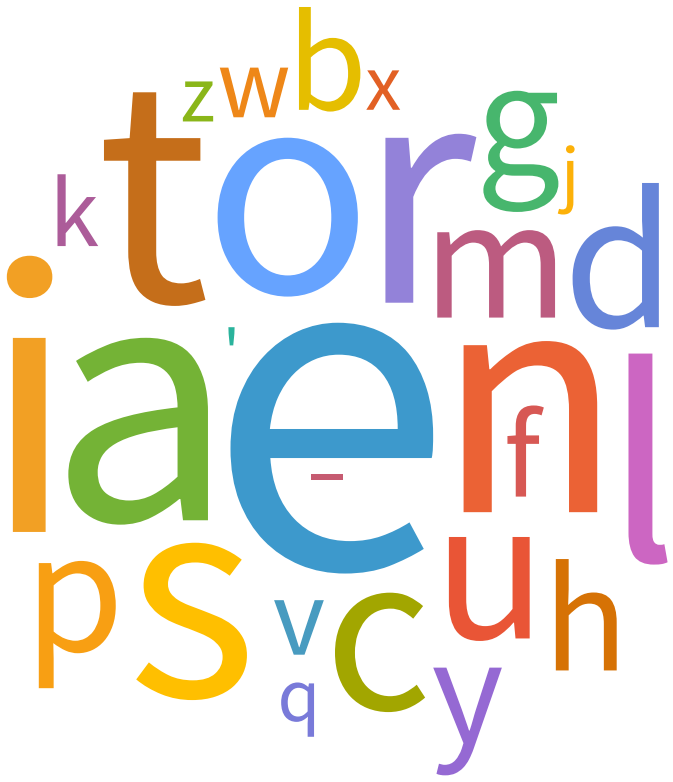
In[236]:=
```
ListLinePlot[StringLength[Take[WordList[], 1000]]]
```
Out[236]=



In[237]:=

```
WordCloud[Characters[StringJoin[WordList[]]]]
```

Out[237]=



In[238]:=

In[239]:=