

Hexi—PS3—2025-01-24

Exercises from EIWL3 Section 9

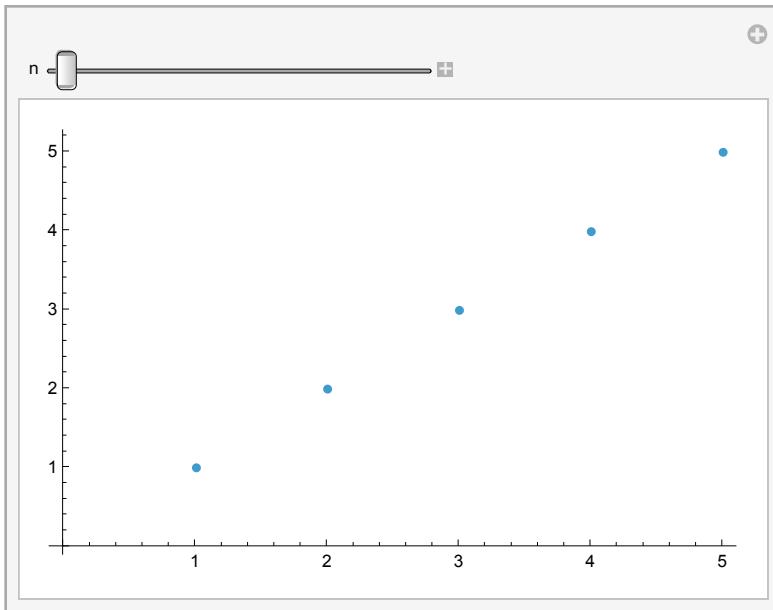
```
In[578]:= Manipulate[Range[n], {n, 0, 100}]
```

```
Out[578]=
```



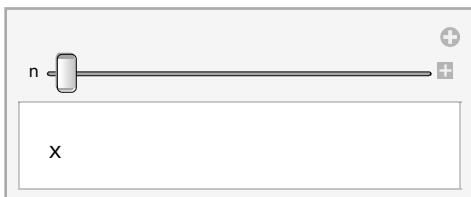
```
In[579]:= Manipulate[ListPlot[Range[n]], {n, 5, 50}]
```

```
Out[579]=
```



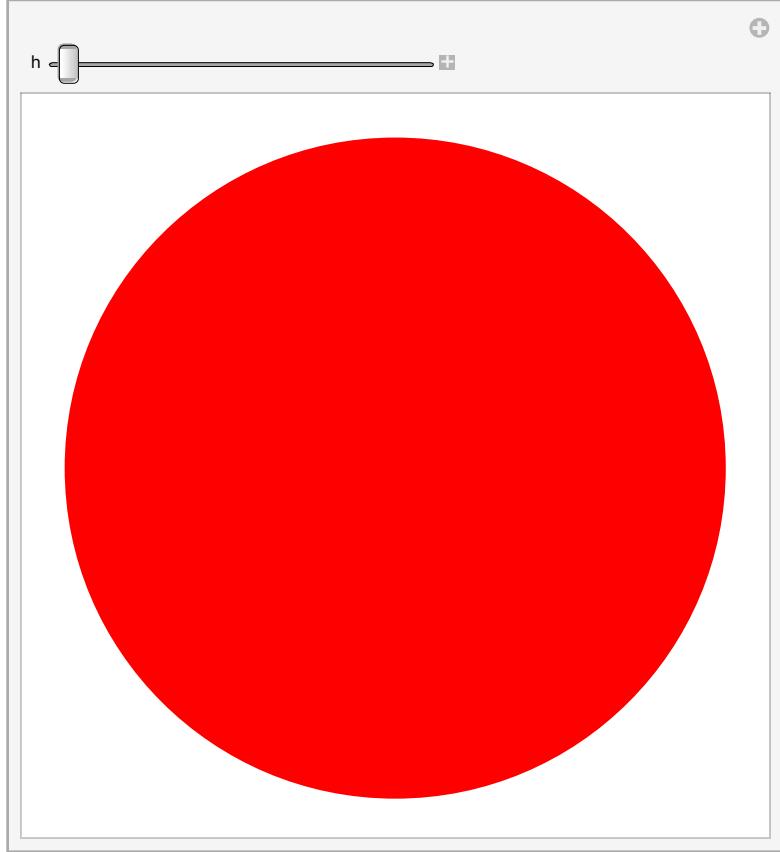
```
In[580]:= Manipulate[Column[Table[x, n]], {n, 1, 10}]
```

```
Out[580]=
```



```
In[581]:= Manipulate[Graphics[Style[Disk[], Hue[h]]], {h, 0, 1}]
```

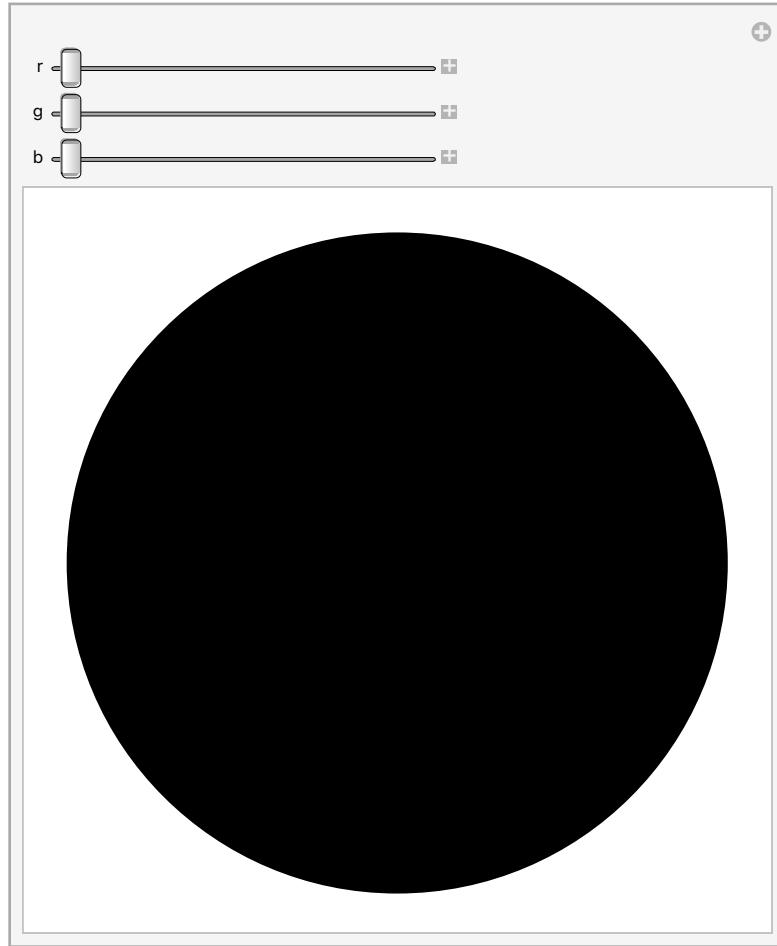
```
Out[581]=
```



In[582]:=

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

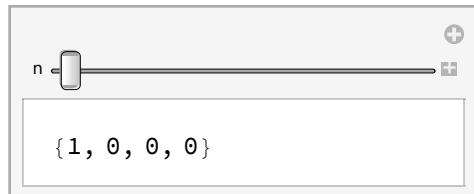
Out[582]=



In[583]:=

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

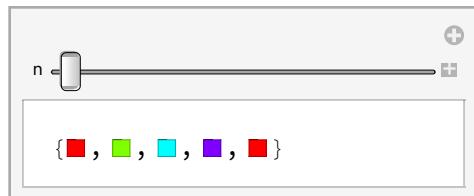
Out[583]=



In[584]:=

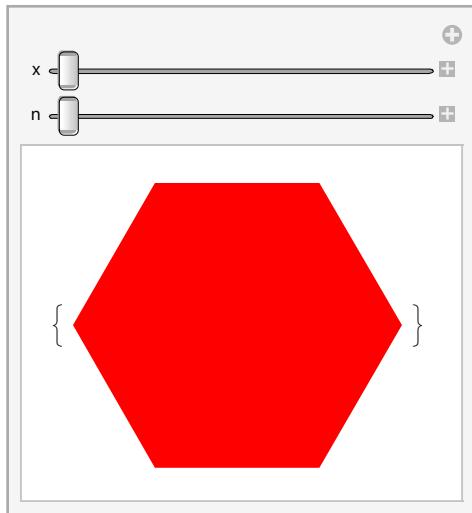
```
Manipulate[Table[Hue[x], {x, 0, 1, (1/(n - 1))}], {n, 5, 50}]
```

Out[584]=



```
In[585]:= Manipulate[Table[Graphics[Style[RegularPolygon[6], Hue[x]]], n], {x, 0, 10}, {n, 1, 10}]
```

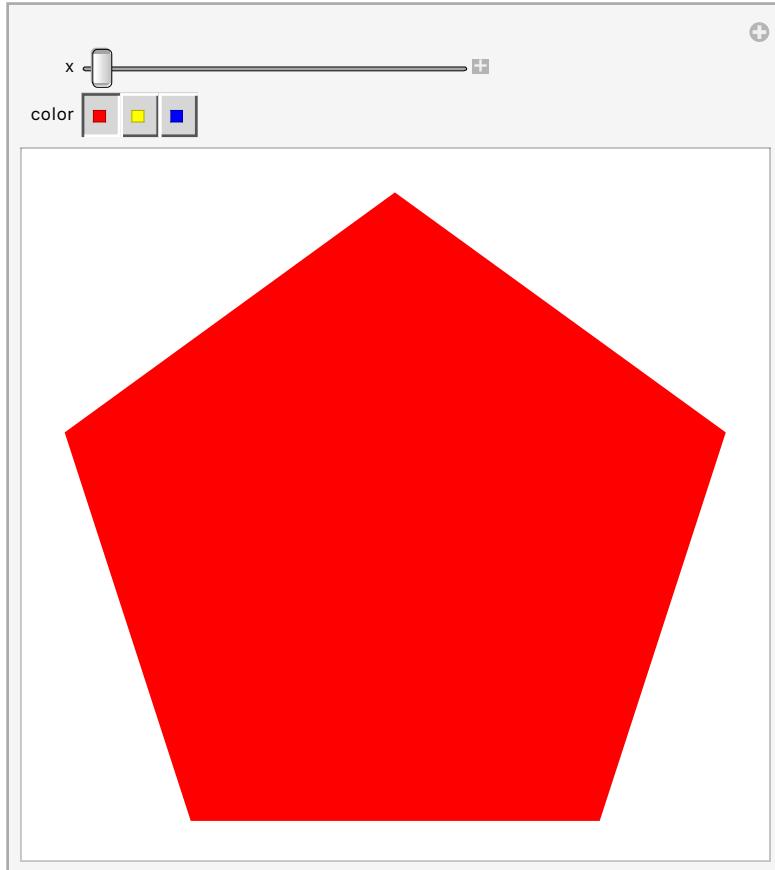
Out[585]=



In[586]:=

```
Manipulate[Graphics[Style[RegularPolygon[x], color]], {x, 5, 20}, {color, {Red, Yellow, Blue}}]
```

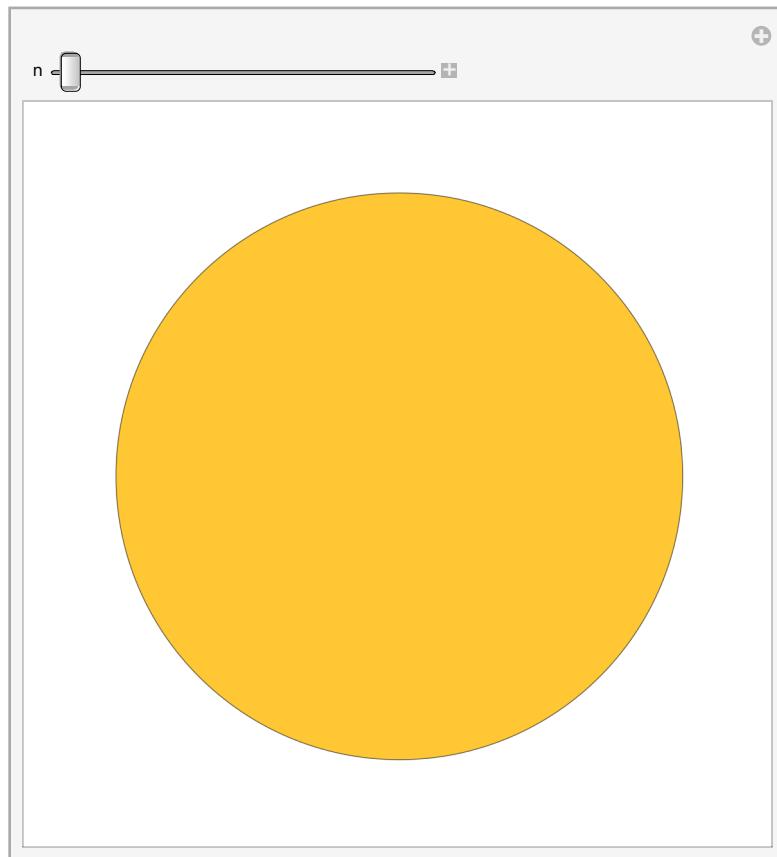
Out[586]=



In[587]:=

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

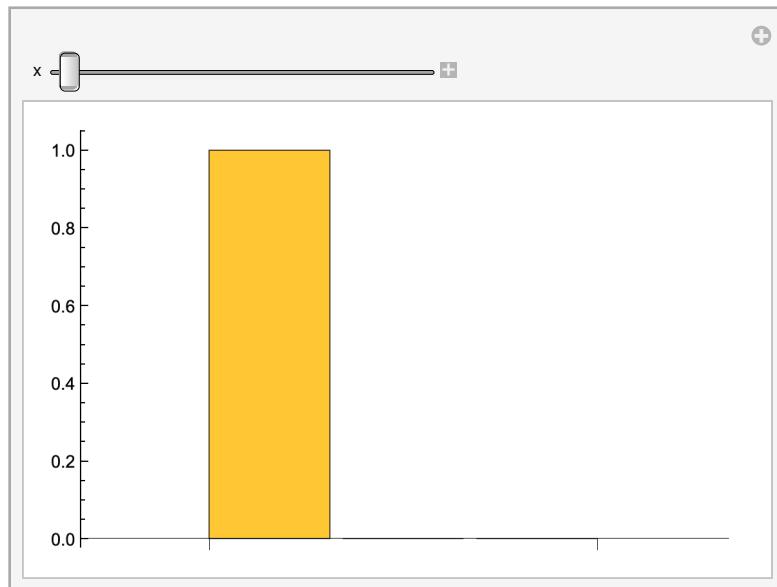
Out[587]=



In[588]:=

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

Out[588]=



In[589]:= Manipulate[RandomColor[n], {n, 1, 50, 1}]

Out[589]=

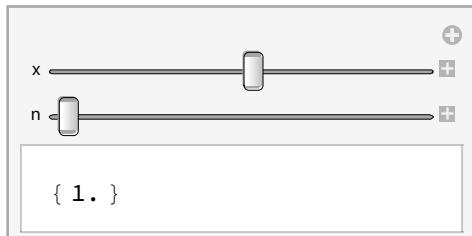


In[590]:= Manipulate[Column[x^n], {x, 1, 25, 1}, {n, 1, 10, 1}]

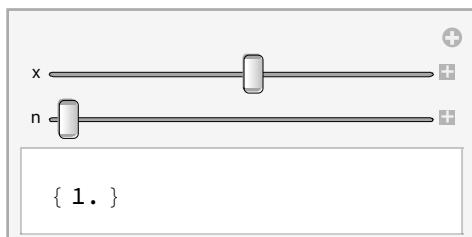
Out[590]=



In[591]:=



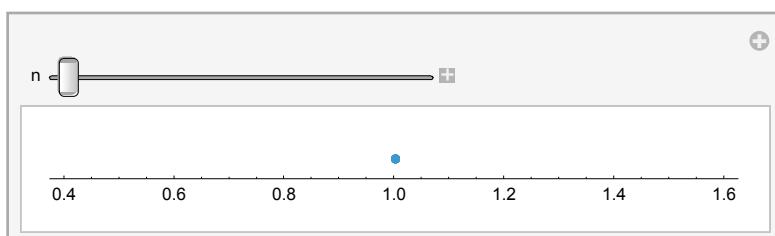
Out[591]=



In[592]:=

Manipulate[NumberLinePlot[Range[10]^n], {n, 0, 5}]

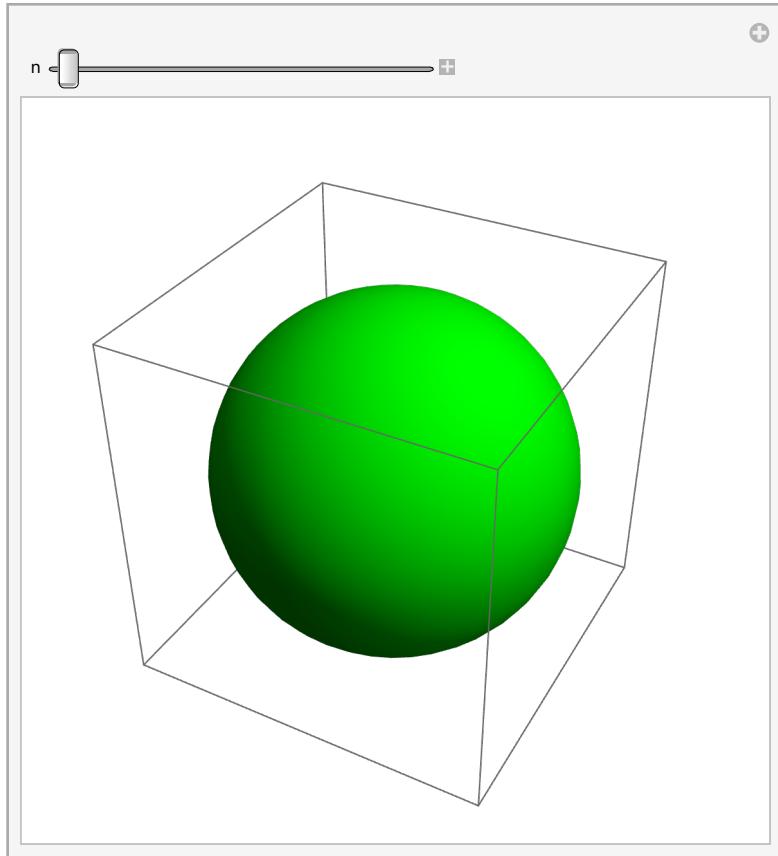
Out[592]=



In[593]:=

```
Manipulate[Graphics3D[Style[Sphere[], RGBColor[n, 1 - n, 0]]], {n, 0, 1}]
```

Out[593]=



In[594]:=

Exercises from EIWL3 Section 10

In[595]:=

CurrentImage[]

Out[595]=



In[596]:=

ColorNegate[



]

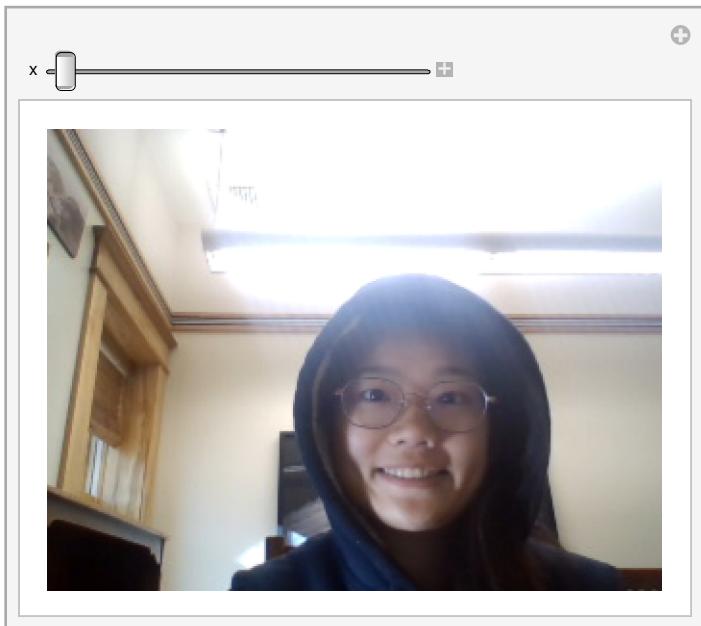
Out[596]=



In[597]:=

```
Manipulate[Blur[, x], {x, 1, 10}]
```

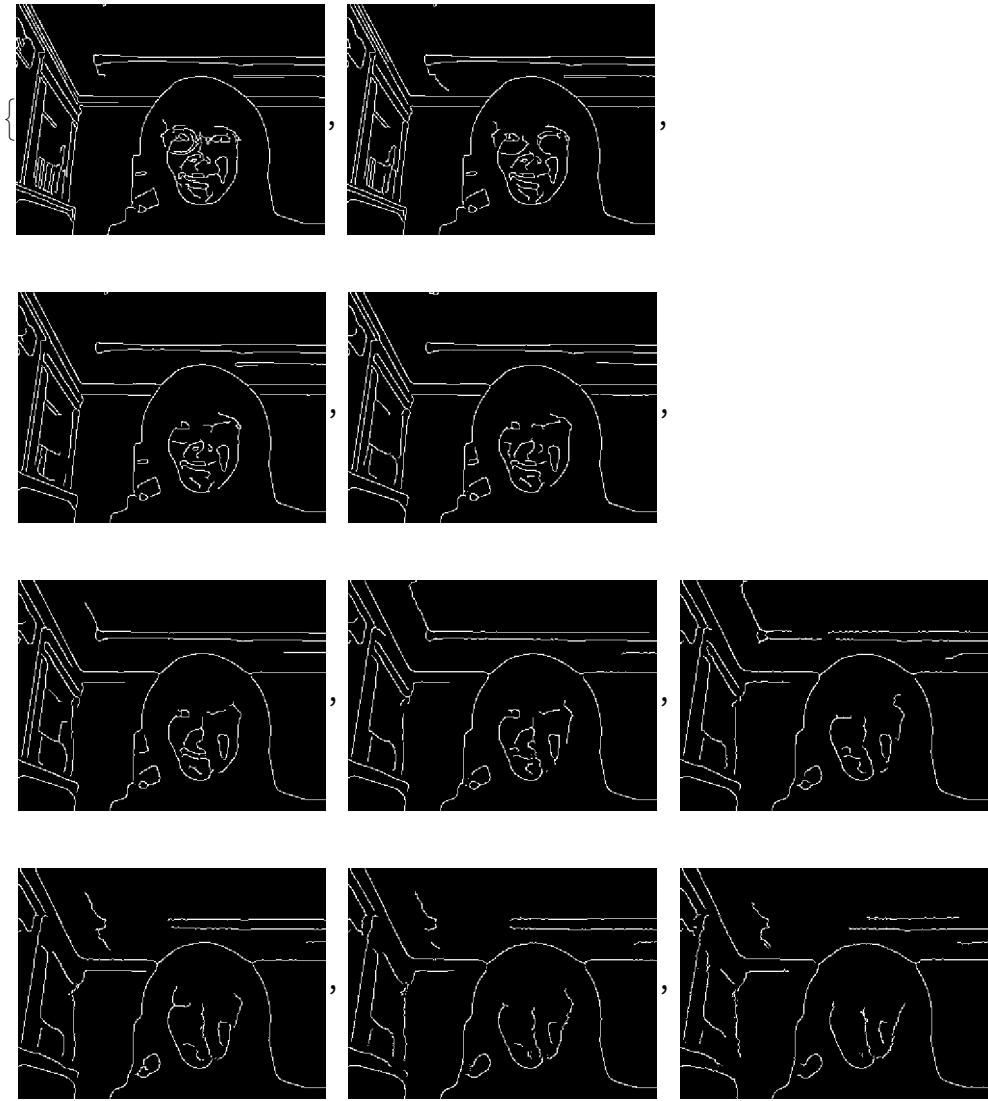
Out[597]=



In[598]:=

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

Out[598]=



In[599]:=

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

Out[599]=



In[600]:=

```
ImageAdd[, Binarize[
```

Out[600]=



In[601]:=

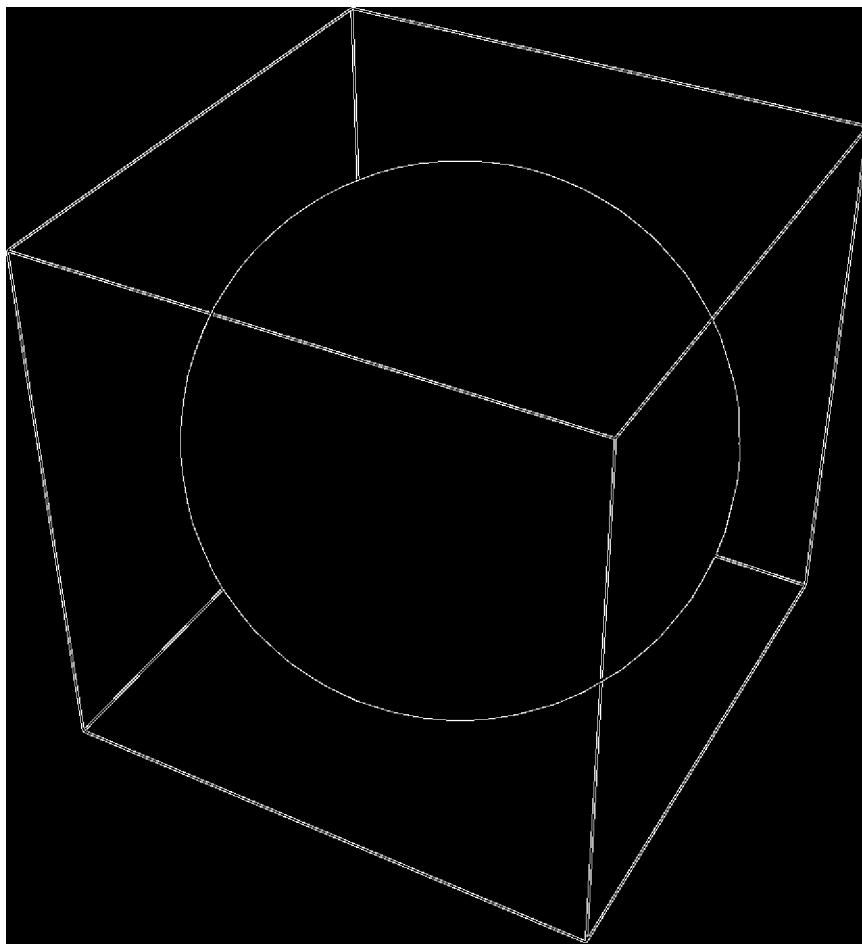
```
Manipulate[EdgeDetect[Blur[
```

Out[601]=



```
In[602]:= EdgeDetect[Graphics3D[Sphere[]]]
```

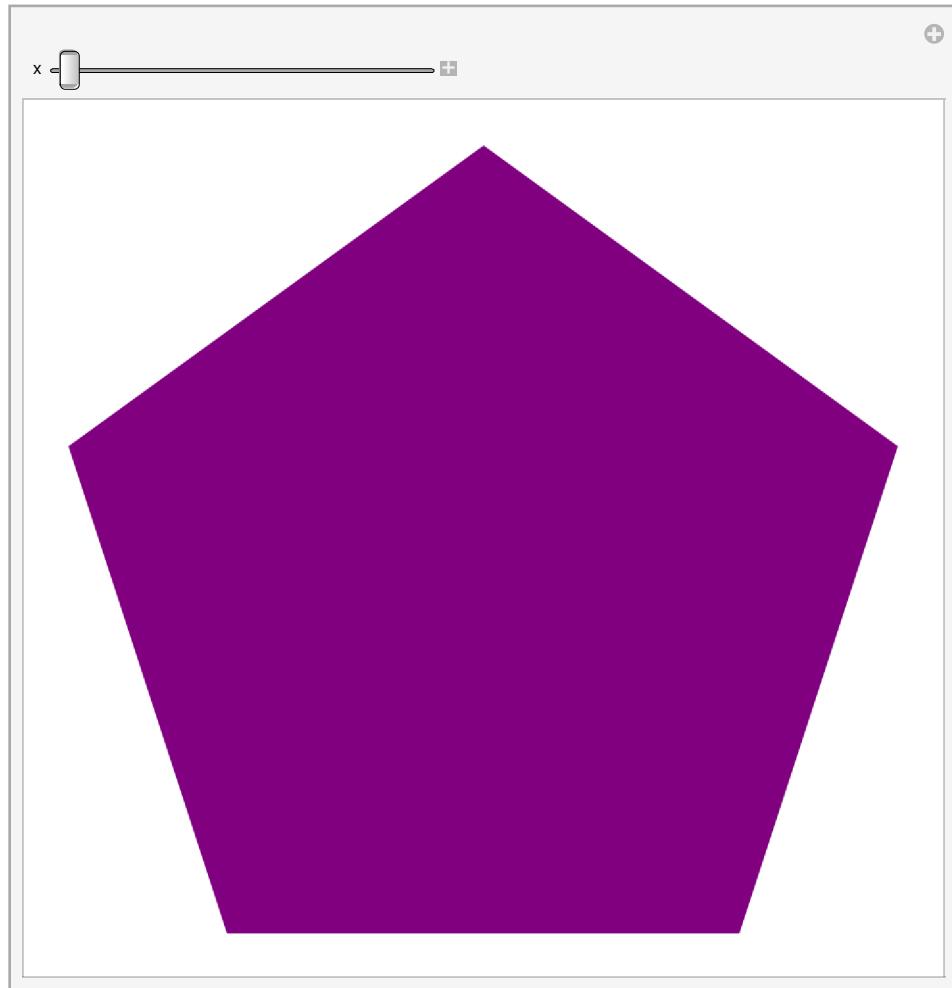
```
Out[602]=
```



In[603]:=

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

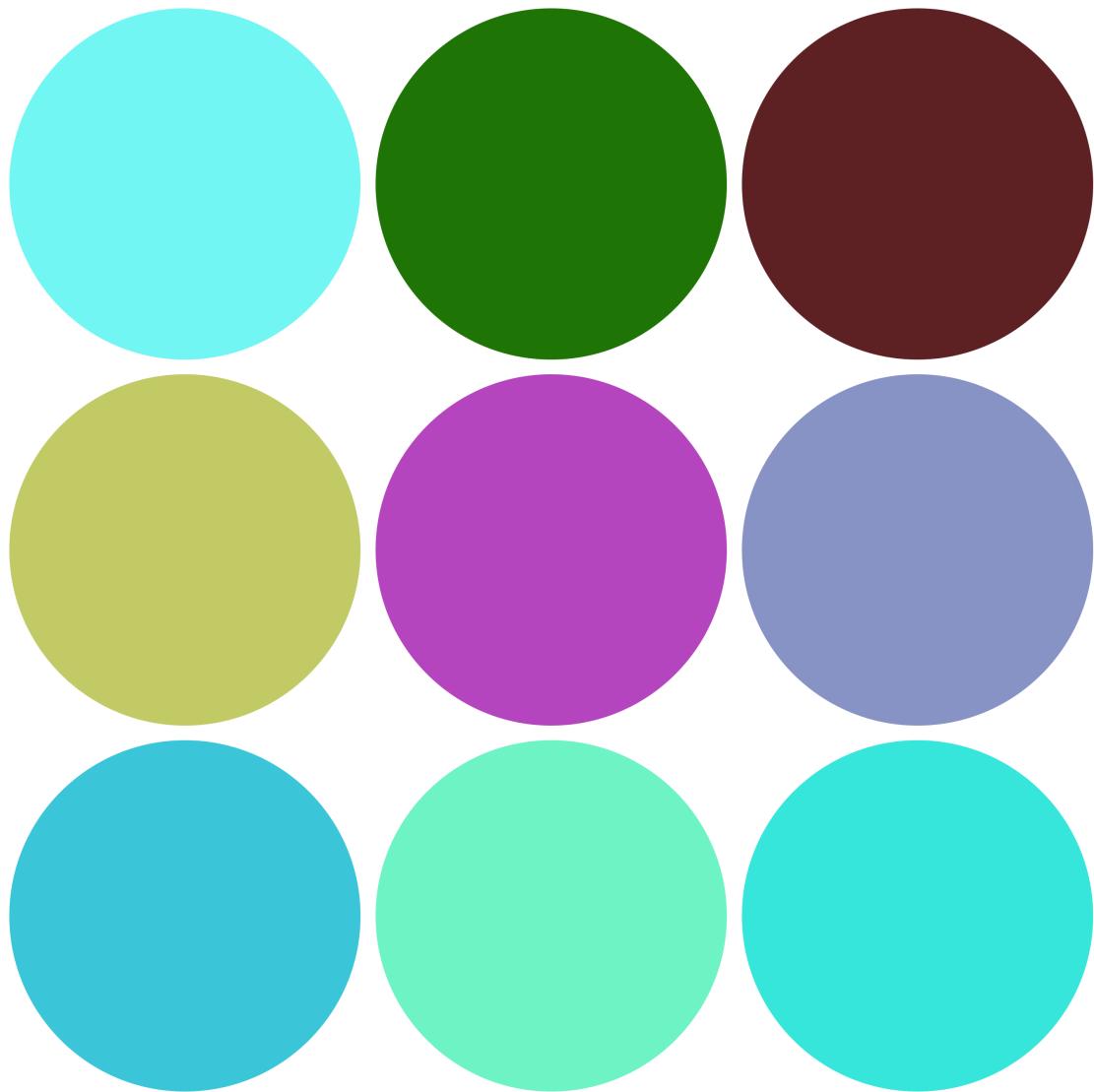
Out[603]=



In[604]:=

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

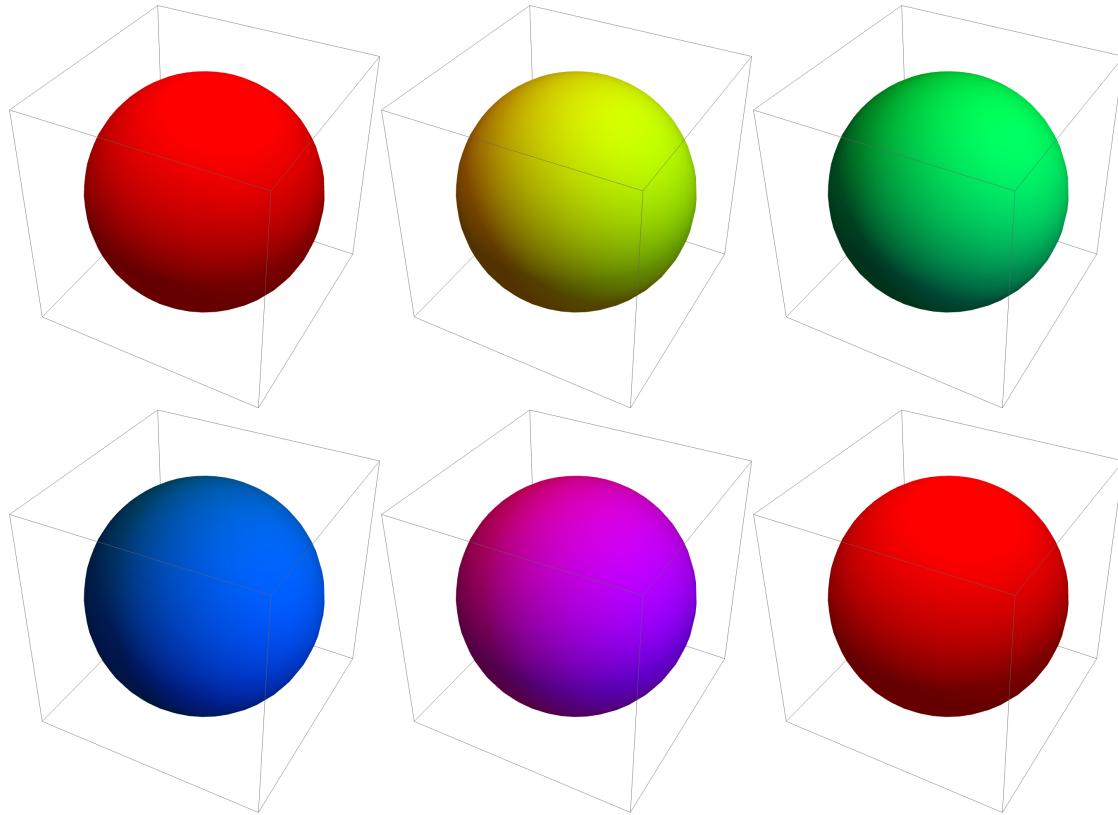
Out[604]=



In[605]:=

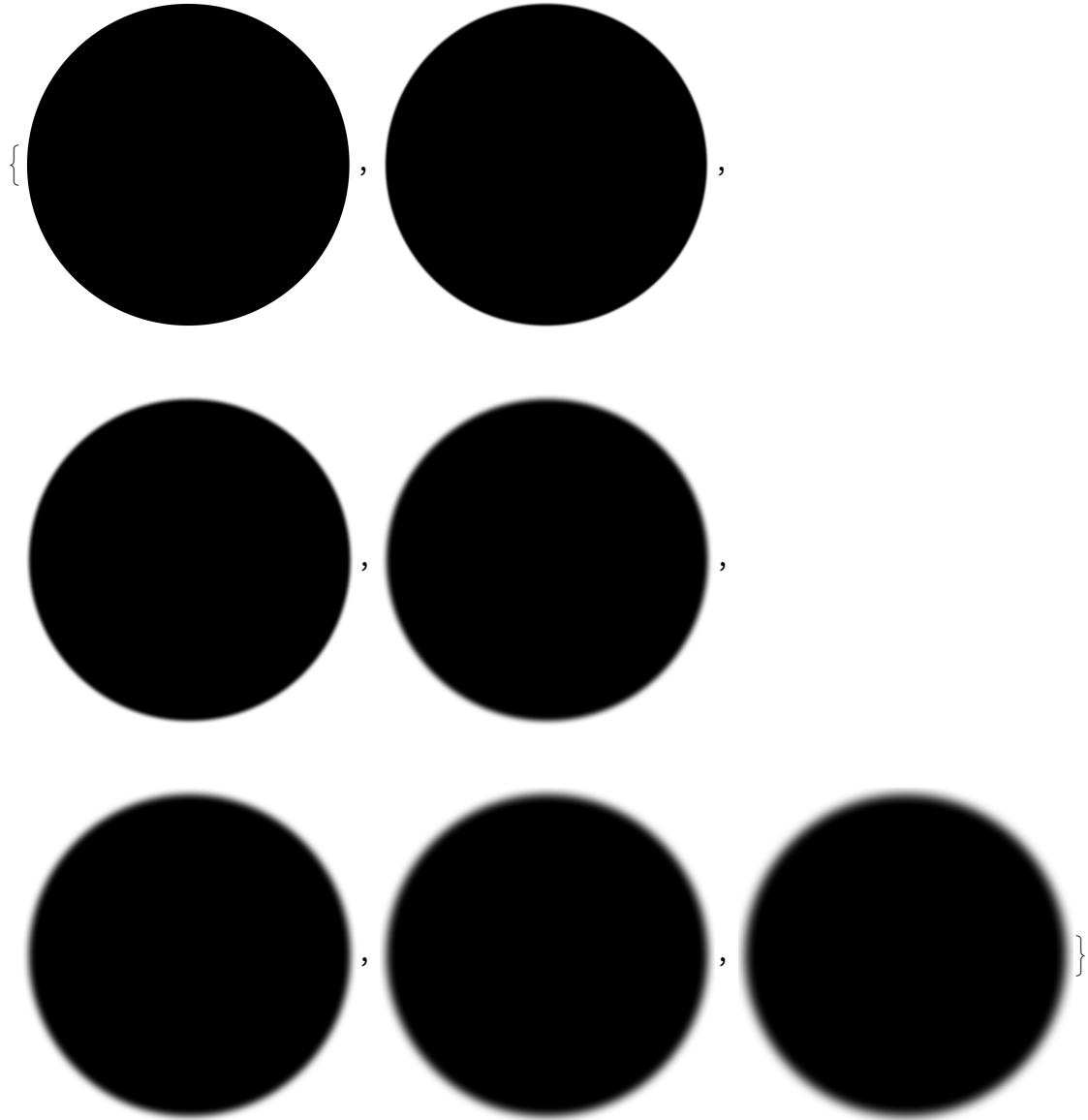
```
ImageCollage[Table[Graphics3D[Style[Sphere[], Hue[x]]], {x, 0, 1, 0.2}]]
```

Out[605]=



```
In[606]:= Table[Blur[Graphics[Disk[]], x], {x, 0, 30, 5}]
```

```
Out[606]=
```



In[607]:=

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

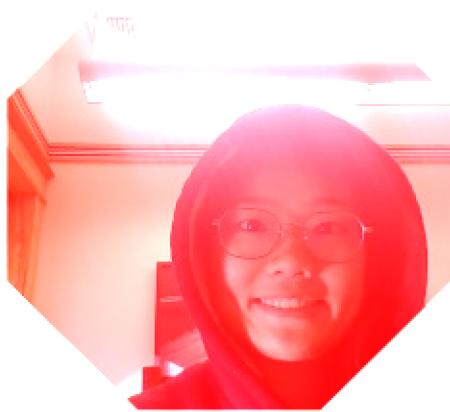
Out[607]=



In[608]:=

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

Out[608]=



In[609]:=



Out[609]=



Exercises from EIWL3 Section 11

In[610]:=

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

Out[610]=

HelloHello

In[611]:=

```
ToUpperCase[StringJoin[Alphabet[]]]
```

Out[611]=

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

In[612]:=

```
StringReverse[StringJoin[Alphabet[]]]
```

Out[612]=

zyxwvutsrqponmlkjihgfedcba

In[613]:=

```
StringJoin[Table["AGCT", 100]]
```

Out[613]=

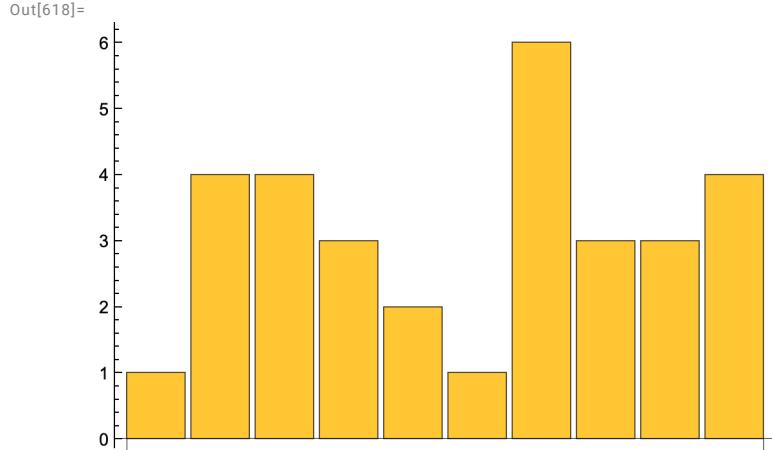
```
In[614]:= StringTake[StringJoin[Alphabet[]], 6]
Out[614]= abcdef

In[615]:= "abcdef"
Out[615]= abcdef

In[616]:= StringLength["this is about strings"]
Column[Table[StringTake["this is about strings", x], {x, 21}]]
Out[616]= 21

Out[617]= 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[618]:= BarChart[StringLength[TextWords["A Long time ago, in a galaxy far, far away"]]]
```



```
In[619]:=
```

```
StringLength[WikipediaData["computer"]]
```

```
Out[619]=
```

```
60266
```

```
In[620]:=
```

```
Length[TextWords[WikipediaData["computer"]]]
```

```
Out[620]=
```

```
9271
```

```
In[621]:=
```

```
Take[TextSentences[WikipediaData["strings"]], 1]
```

```
Out[621]=
```

```
{String or strings may refer to:}
```

```
In[622]:=
```

```
StringJoin[StringTake[TextSentences[WikipediaData["computer"]], 1]]
```

```
Out[622]=
```

```
AMTTACCESEMTTCTPP=ITTDDBTTTT==DTLTTTSITIIDMTAAATTIASIBIAITITIITSI=CCAHTFTTTAEBNH
=ITax()2{,THI=DHTTTTAB==CBTDETTITIRTZTT=PTEITDTTHACIINCTLOTIIIHBT==TTHTVTE=
ECWATIHJTIIAATBAIL=TJFCJTHATHTTWITT=TTDTKIHKNHPNIMTGFTTWISTITS=TTLTNTT=C=A=SH=
TC==ATIET=WTTSC=TSC=TCATRDIRTPWIJSAIT=TES=TTSHTALTSG=
AETTLSIETWOAMTRACrRIISFIIG=IDOHCIAMA=WTOBITSTBSIT=SMSTSS=SSCICW=T=TTMIAL=
TITHTFMPWSTCBOTOI=ITTSTTITMWITC=PUTTS=MF=ATHHIT=PALTP=ETHOBSA=CTITTTITCITA"=AWA=
TMH=TQCVSLTTT=ACARPE=AT=====M
```

```
In[623]:=
```

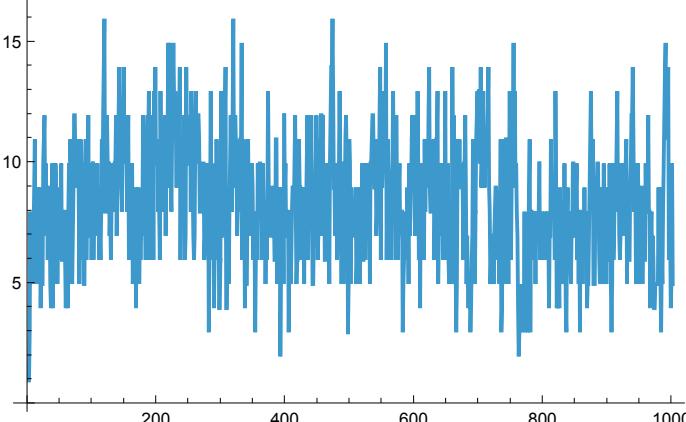
```
Max[StringLength[TextWords[WordList[]]]]
```

```
Out[623]=
```

```
23
```

```
In[624]:= Count[StringTake[WordList[], 1], "q"]
Out[624]= 194

In[625]:= ListLinePlot[StringLength[Take[WordList[], 1000]]]
Out[625]=
```



```
In[626]:= WordCloud[Characters[StringJoin[WordList[]]]]
Out[626]=
```

