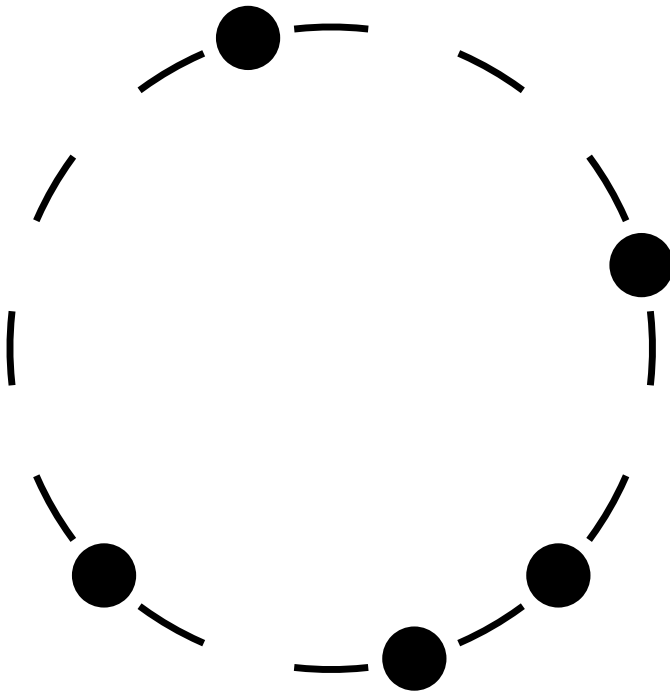


```

In[259]:= circle12[centre_:{0,0},radius_:1] :=
  {Thickness->0.01,Circle[centre,radius,#]}&/@
  Table[ $\pi/6\{(n+1-0.2),(n+1+0.2)\}$ ,{n,1,12}]
ringFromNoteList[l_]:=Graphics[
  {Disk[#,0.1]&/@CirclePoints[12][[l]],circle12[]}]
ringFromNoteList[{1,2,4,7,11}]

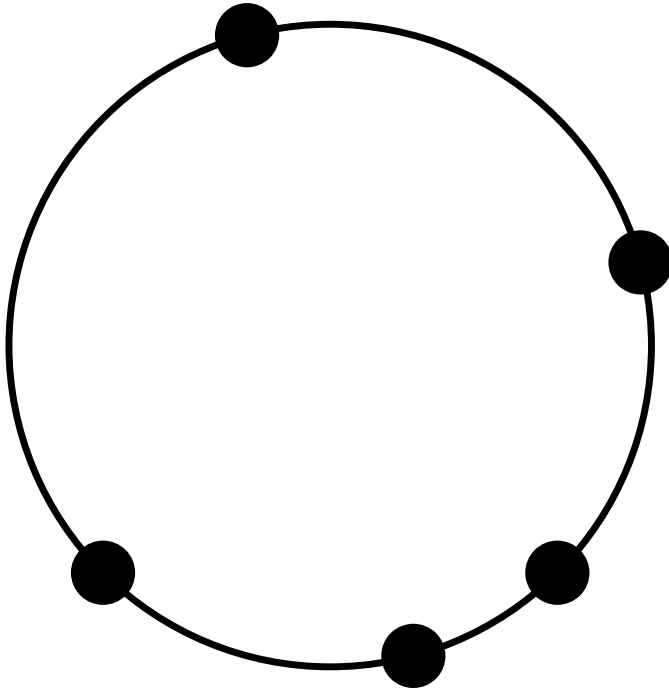
```

Out[261]=



```
In[268]:= circle0[centre_:{0,0}, radius_:1] :=  
  {Thickness -> 0.01, Circle[centre, radius]}  
ringFromNoteList[l_] :=  
  Graphics[{Disk[#, 0.1] & /@ CirclePoints[12][[l]], circle0[]}]  
ringFromNoteList[{1, 2, 4, 7, 11}]
```

Out[270]=

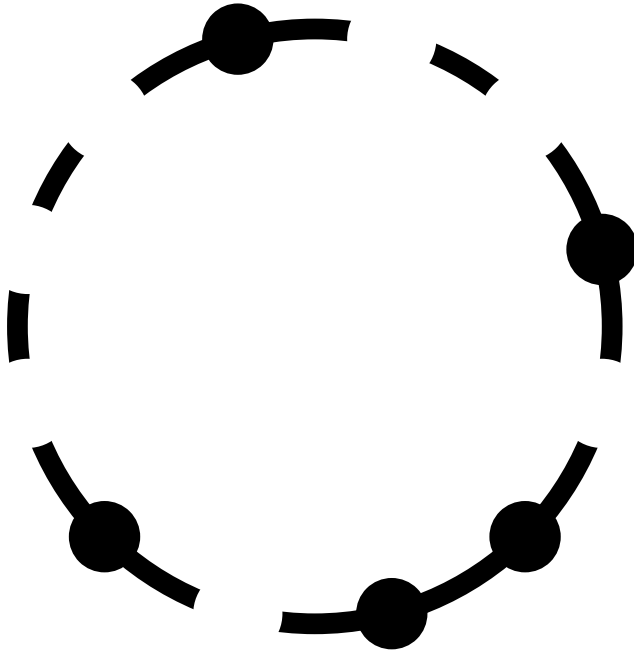


```

In[353]:= circle0[centre_:{0,0}, radius_:1] :=
  {Thickness -> 0.03, Circle[centre, radius]}
complementaryNoteList[l_] := Complement[Range[12], l]
ringFromNoteList[l_] :=
  Graphics[{{Black, Disk[#, 0.12] & /@ CirclePoints[12][[l]]}, circle0[],
    {White, Disk[#, 0.15] & /@ CirclePoints[12][[complementaryNoteList[l]]]}}]
ringFromNoteList[{1, 2, 4, 7, 11}]

```

Out[356]=

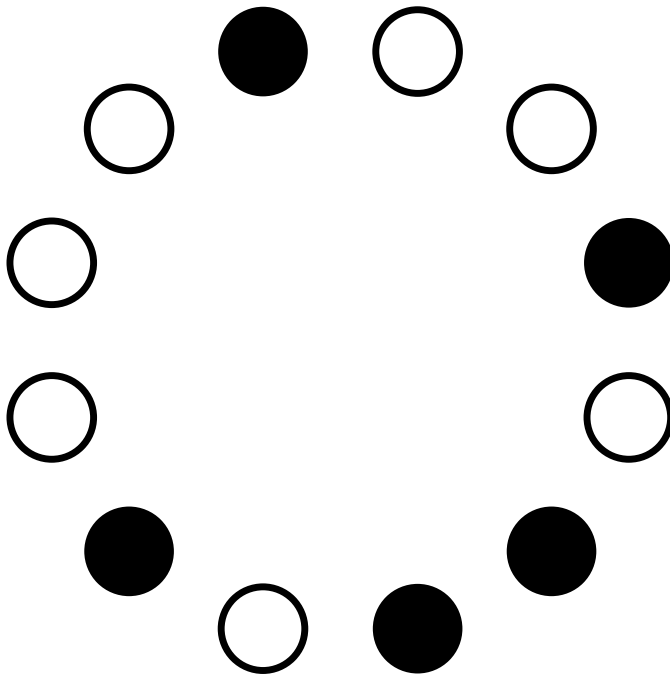


```

In[406]:= whiteDotLineThickness = 0.01;
blackDotRadius = 0.15;
whiteDotRadius = blackDotRadius - whiteDotLineThickness;
ringFromNoteList[l_] :=
  Graphics[{{Black, Disk[#, blackDotRadius] & /@ CirclePoints[12][[l]]},
    {White, EdgeForm[Thickness[whiteDotLineThickness]],
      Disk[#, whiteDotRadius] & /@ CirclePoints[12][[complementaryNoteList[l]]]}}}
ringFromNoteList[{1, 2, 4, 7, 11}]

```

Out[410]=

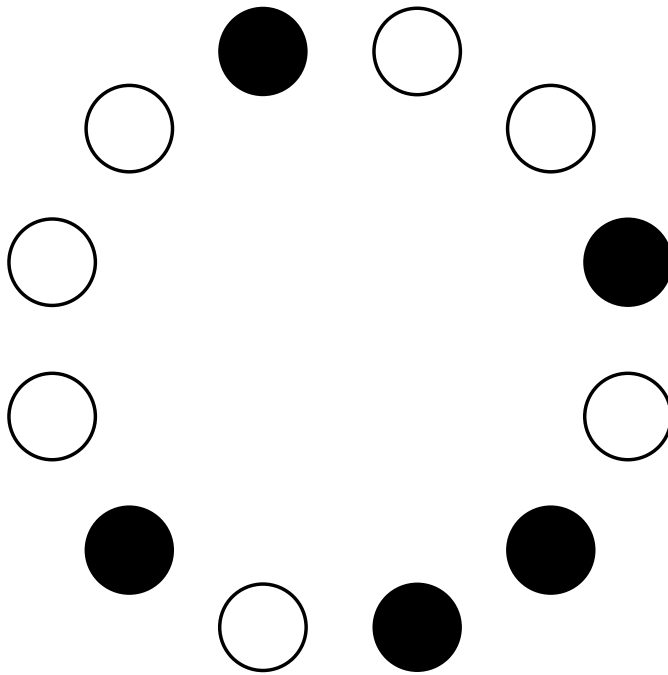


```

In[411]:= whiteDotLineThickness = 0.005;
blackDotRadius = 0.15;
whiteDotRadius = blackDotRadius - whiteDotLineThickness;
ringFromNoteList[l_] :=
  Graphics[{{Black, Disk[#, blackDotRadius] & /@ CirclePoints[12][[l]]},
    {White, EdgeForm[Thickness[whiteDotLineThickness]],
      Disk[#, whiteDotRadius] & /@ CirclePoints[12][[complementaryNoteList[l]]]}}}
ringFromNoteList[{1, 2, 4, 7, 11}]

```

Out[415]=

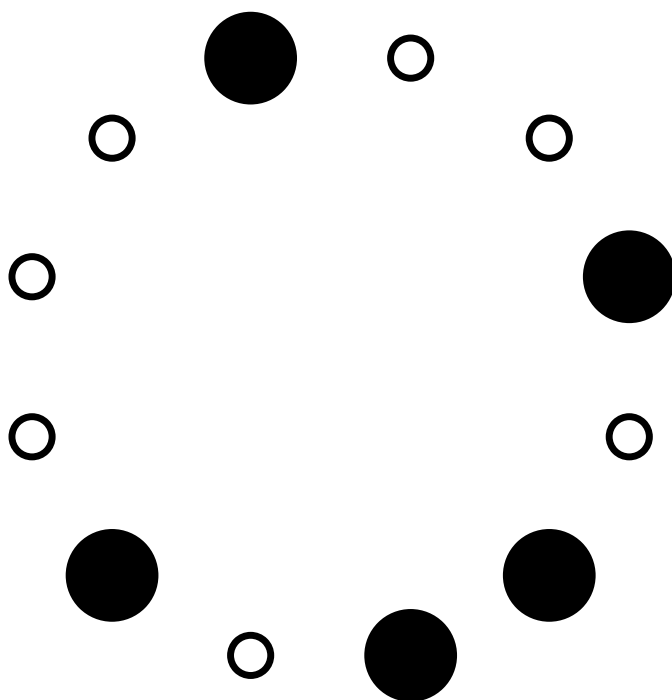


```

In[416]:= whiteDotLineThickness = 0.01;
blackDotRadius = 0.15;
whiteDotRadius = 0.065;
ringFromNoteList[l_] :=
  Graphics[{{Black, Disk[#, blackDotRadius] & /@ CirclePoints[12][[l]]},
    {White, EdgeForm[Thickness[whiteDotLineThickness]],
      Disk[#, whiteDotRadius] & /@ CirclePoints[12][[complementaryNoteList[l]]]}}}
ringFromNoteList[{1, 2, 4, 7, 11}]

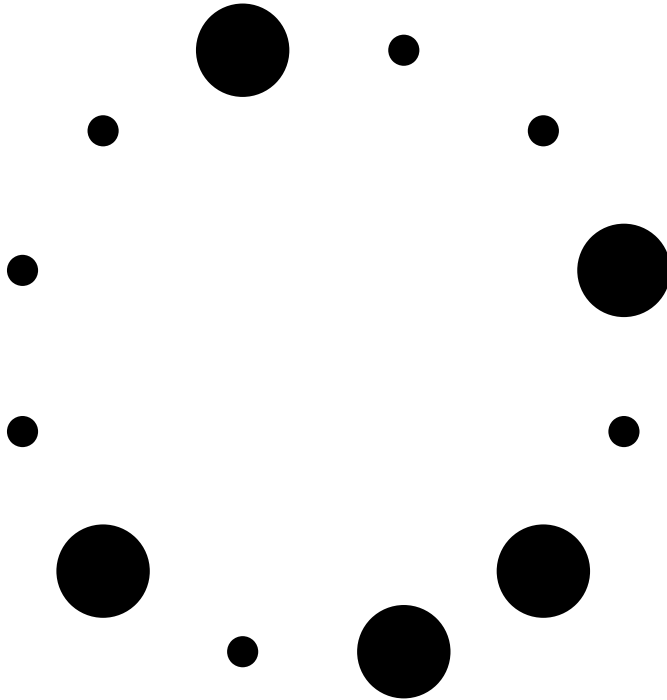
```

Out[420]=



```
In[426]:= whiteDotLineThickness = 0.01;
blackDotRadius = 0.15;
whiteDotRadius = 0.05;
ringFromNoteList[l_] :=
  Graphics[{{Black, Disk[#, blackDotRadius] & /@ CirclePoints[12][[l]]}, {Black,
    Disk[#, whiteDotRadius] & /@ CirclePoints[12][[complementaryNoteList[l]]]}}]
ringFromNoteList[{1, 2, 4, 7, 11}]
```

Out[430]=

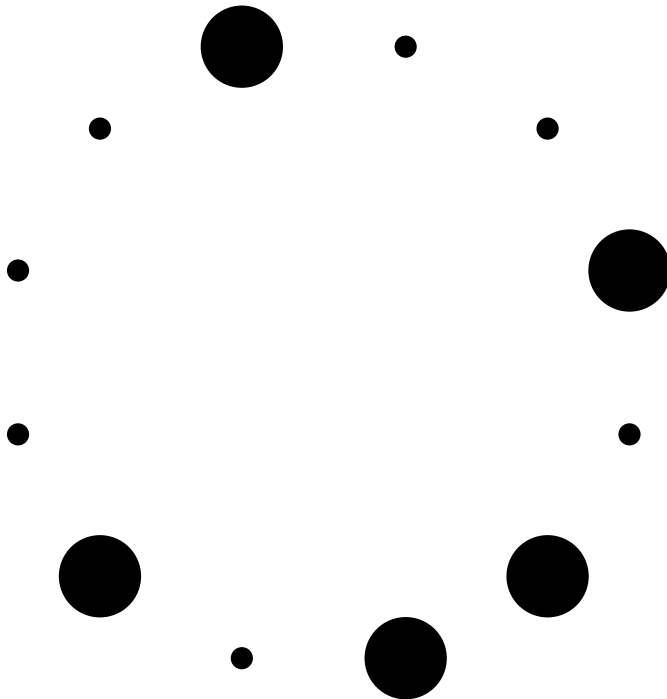


```

In[461]:= whiteDotLineThickness = 0.01;
blackDotRadius = 0.13;
whiteDotRadius = 0.035;
ringFromNoteList[l_] :=
  Graphics[{{Black, Disk[#, blackDotRadius] & /@ CirclePoints[12][[l]]}, {Black,
    Disk[#, whiteDotRadius] & /@ CirclePoints[12][[complementaryNoteList[l]]]}}]
ringFromNoteList[{1, 2, 4, 7, 11}]

```

Out[465]=



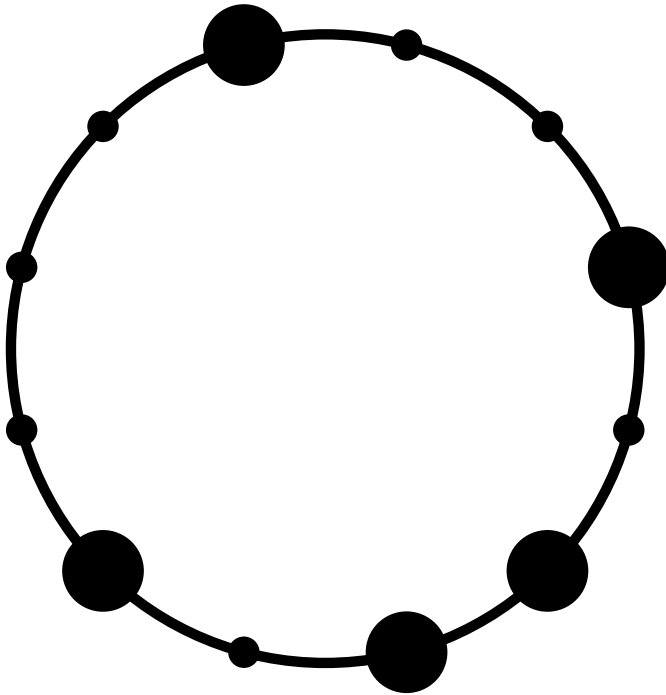


```

In[519]:= whiteDotLineThickness = 0.01;
blackDotRadius = 0.13;
whiteDotRadius = 0.05;
circle1[centre_:{0,0}, radius_:1] :=
  {Thickness -> 0.015, Circle[centre, radius]}
ringFromNoteList[l_] :=
  Graphics[{{Black, Disk[#, blackDotRadius] & /@ CirclePoints[12][[l]]},
    {Black, Disk[#, whiteDotRadius] & /@
      CirclePoints[12][[complementaryNoteList[l]]]}, circle1[]}]
ringFromNoteList[{1, 2, 4, 7, 11}]

```

Out[524]=

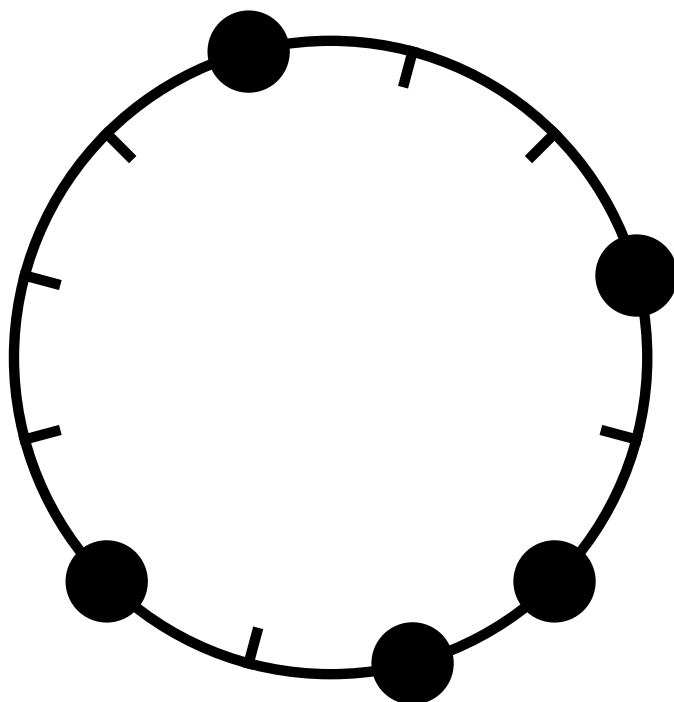


```

In[575]:= radialLine[p_, innerRadius_] := {Line[{p, Normalize[p] * innerRadius]}}
whiteDotLineThickness = 0.01;
blackDotRadius = 0.13;
lineThickness = 0.015;
circle1[centre_:{0,0}, radius_:1] :=
  {Thickness->lineThickness, Circle[centre, radius]}
ringFromNoteList[l_] :=
  Graphics[{{Black, Disk[#, blackDotRadius] & /@ CirclePoints[12][[l]]},
    {{Thickness->lineThickness, radialLine[#, 0.9]} & /@
      CirclePoints[12][[complementaryNoteList[l]]]}, circle1[]}]
ringFromNoteList[{1, 2, 4, 7, 11}]

```

Out[581]=

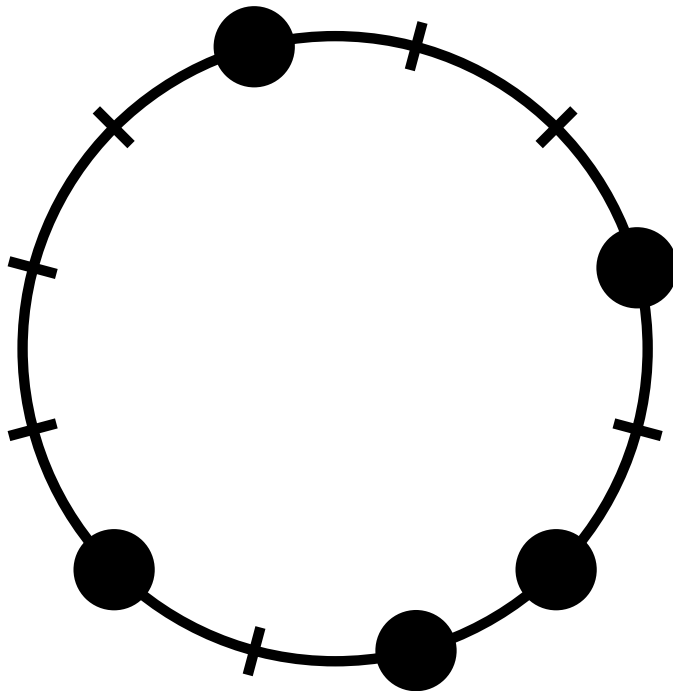


```

In[603]:= radialLine[p_, innerRadius_] :=
  {Line[{Normalize[p]/innerRadius, Normalize[p]*innerRadius]}}
whiteDotLineThickness = 0.01;
blackDotRadius = 0.13;
lineThickness = 0.015;
circle1[centre_: {0, 0}, radius_: 1] :=
  {Thickness -> lineThickness, Circle[centre, radius]}
ringFromNoteList[l_] :=
  Graphics[{{Black, Disk[#, blackDotRadius] & /@ CirclePoints[12][[l]]},
    {{Thickness -> lineThickness, radialLine[#, 0.94]} & /@
      CirclePoints[12][[complementaryNoteList[l]]]}, circle1[]}]
ringFromNoteList[{1, 2, 4, 7, 11}]

```

Out[609]=

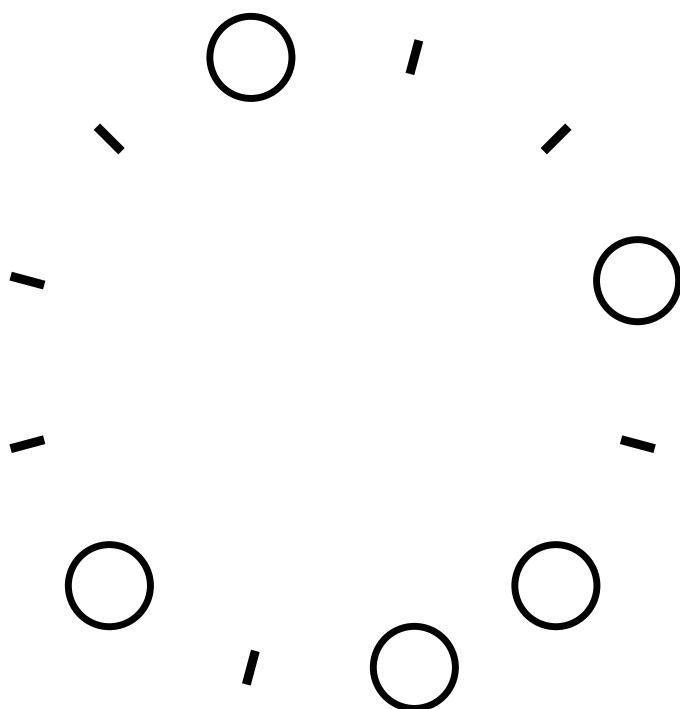


```

In[659]:= radialLine[p_, innerRadius_] :=
  {Line[{Normalize[p]/innerRadius, Normalize[p]*innerRadius]}}
whiteDotLineThickness = 0.01;
blackDotRadius = 0.13;
lineThickness = 0.013;
circle1[centre_: {0, 0}, radius_: 1] :=
  {Thickness -> lineThickness, Circle[centre, radius]}
ringFromNoteList[l_] :=
  Graphics[{White, EdgeForm[Thickness[whiteDotLineThickness]],
    Disk[#, blackDotRadius] & /@ CirclePoints[12][[l]],
    {Black, Thickness -> lineThickness, radialLine[#, 0.96]} & /@
      CirclePoints[12][[complementaryNoteList[l]]]}]
ringFromNoteList[{1, 2, 4, 7, 11}]

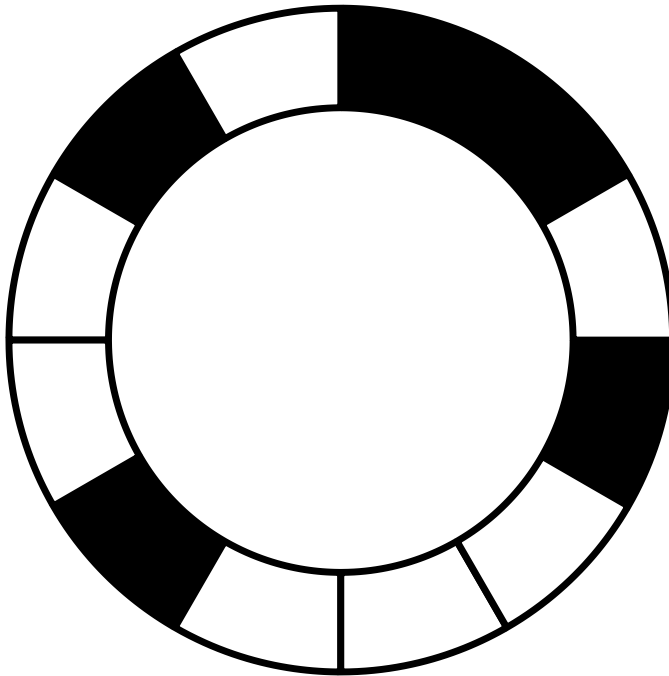
```

Out[665]=



```
In[714]:= Graphics[{{{{EdgeForm[Thickness[0.01]], Black, Annulus[{0, 0}, {0.7, 1},
  {#, # + 2  $\pi$  / 12}]} & /@ (2  $\pi$  Range[12] / 12) [[{1, 2, 4, 7, 11}]]},
  {{EdgeForm[Thickness[0.01]], White, Annulus[{0, 0},
    {0.7, 1}, {#, # + 2  $\pi$  / 12}]} & /@
    (2  $\pi$  Range[12] / 12) [[complementaryNoteList[{1, 2, 4, 7, 11}]]]}}
```

Out[714]=

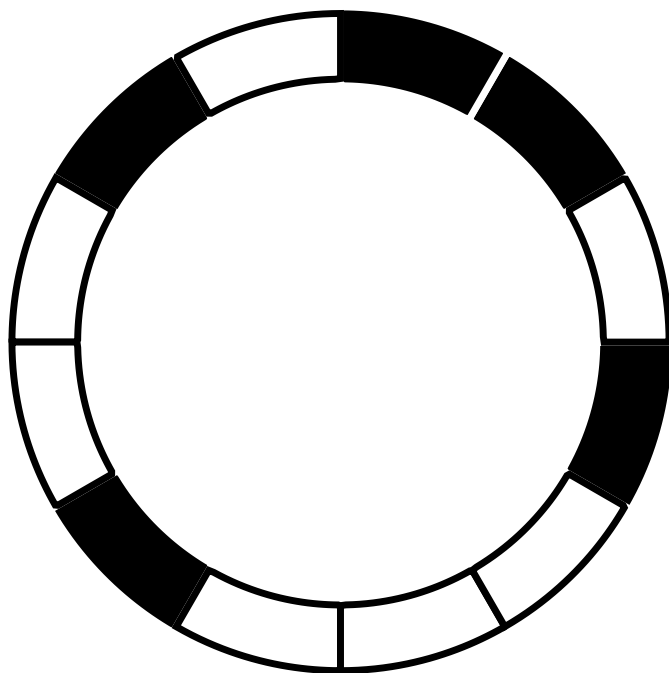


```

In[738]:= Graphics[
  {
    {
      {EdgeForm[{White, Thickness[0.01]}], Black, Annulus[{0, 0}, {0.78, 1.02},
        {#, # + 2  $\pi$  / 12}]} & /@ (2  $\pi$  Range[12] / 12) [[{1, 2, 4, 7, 11}]]},
    {EdgeForm[Thickness[0.01]], White, Annulus[{0, 0},
      {0.8, 1}, {#, # + 2  $\pi$  / 12}]} & /@
      (2  $\pi$  Range[12] / 12) [[complementaryNoteList[{1, 2, 4, 7, 11}]]]}]

```

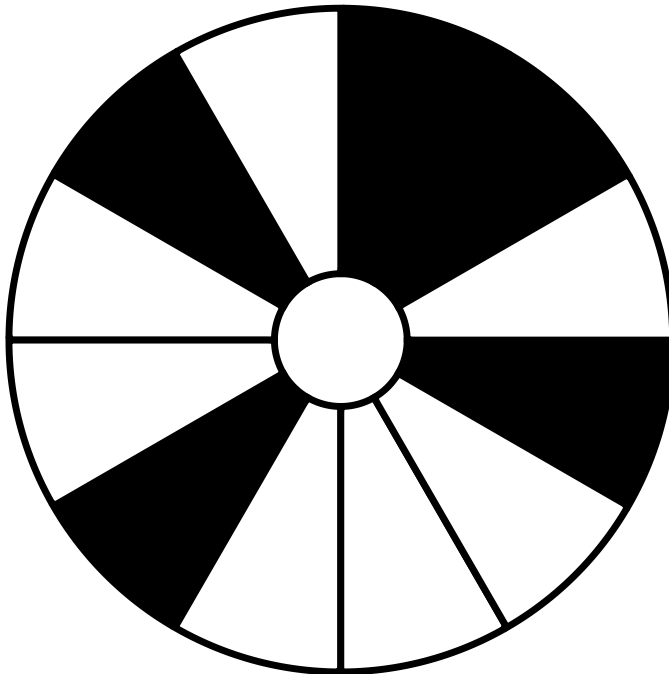
Out[738]=



```

In[717]:= Graphics[{{{{EdgeForm[Thickness[0.01]], Black, Annulus[{0, 0}, {0.2, 1},
    {#, # + 2  $\pi$  / 12}]} & /@ (2  $\pi$  Range[12] / 12) [[{1, 2, 4, 7, 11}]]},
    {{EdgeForm[Thickness[0.01]], White, Annulus[{0, 0},
    {0.2, 1}, {#, # + 2  $\pi$  / 12}]} & /@
    (2  $\pi$  Range[12] / 12) [[complementaryNoteList[{1, 2, 4, 7, 11}]]]}]}
    
```

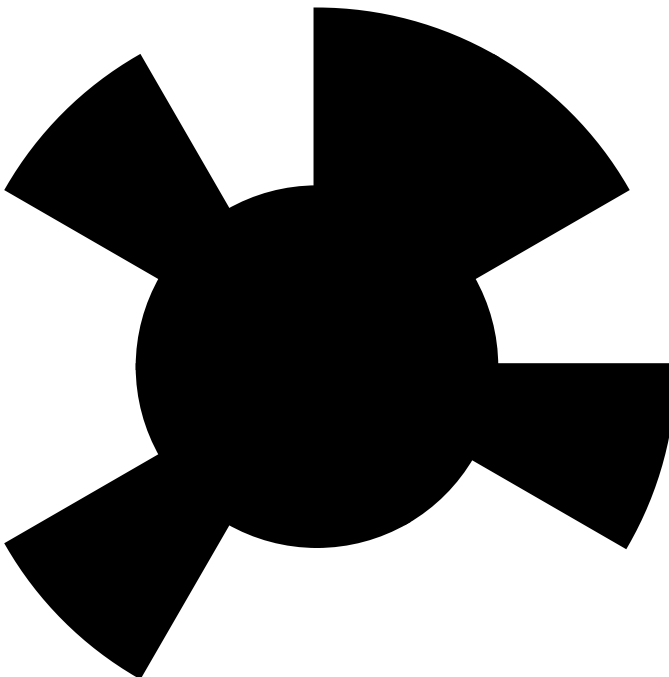
Out[717]=



```

In[721]:= Graphics[{{{{EdgeForm[Thickness[0.01]], Black, Disk[{0, 0}, 1, {#, # + 2  $\pi$  / 12}]} & /@
    (2  $\pi$  Range[12] / 12) [[{1, 2, 4, 7, 11}]]},
    {{EdgeForm[Thickness[0.01]], Black, Disk[{0, 0}, 0.5, {#, # + 2  $\pi$  / 12}]} & /@
    (2  $\pi$  Range[12] / 12) [[complementaryNoteList[{1, 2, 4, 7, 11}]]]}]}
    
```

Out[721]=



```

In[730]:= Graphics[{{{Thickness[0.03], Black, Circle[{0, 0}, 1, {#, # + 2  $\pi$ /19}]} & /@
  (2  $\pi$  Range[12] / 12) [[{1, 2, 4, 7, 11}]]},
  {Thickness[0.03], Black, Circle[{0, 0}, 0.7, {#, # + 2  $\pi$ /19}]} & /@
  (2  $\pi$  Range[12] / 12) [[complementaryNoteList[{1, 2, 4, 7, 11}]]]}]

```

Out[730]=

