Hexi — PS 5 — 2025-02-04

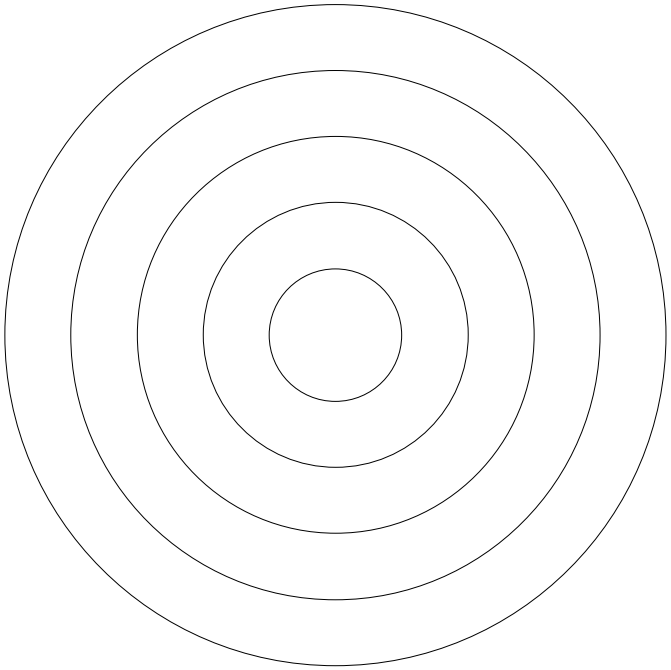
EIWL3 Sections 14 and 17

Exercises from EIWL3 Section 14

In[294]:=

```
Graphics[Table[Circle[{0, 0}, r], {r, 1, 5}]]
```

Out[294]=

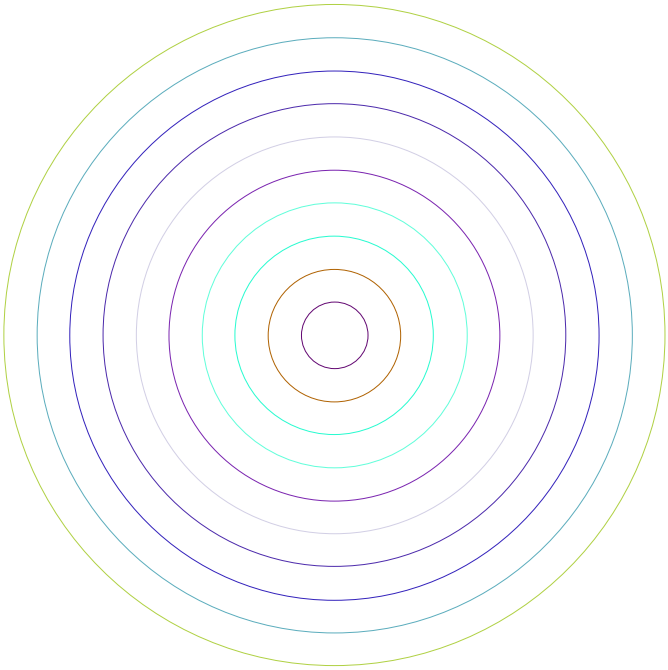


Perfect!

8/8

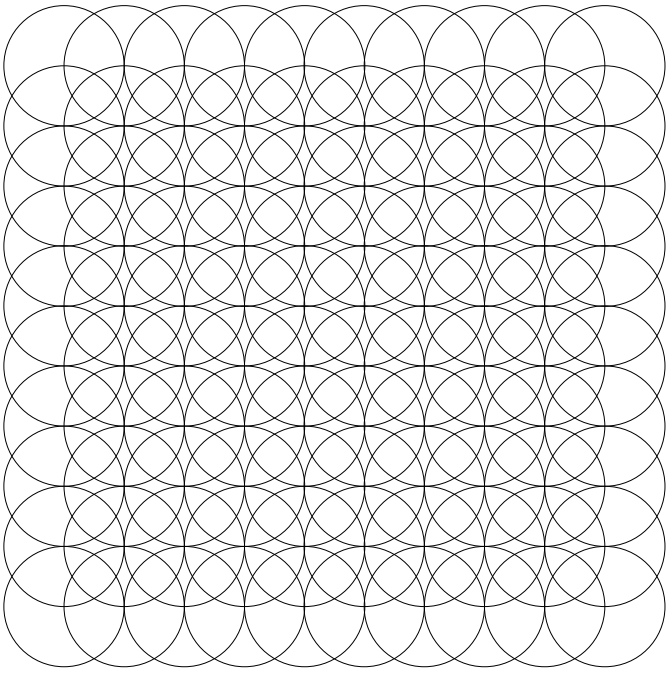
In[295]:=
```
Graphics[Table[Style[Circle[{0, 0}, r], RandomColor[]], {r, 1, 10, 1}]]
```

Out[295]=



In[296]:=
```
Graphics[Table[Circle[{x, y}], {x, 0, 9}, {y, 0, 9}]]
```

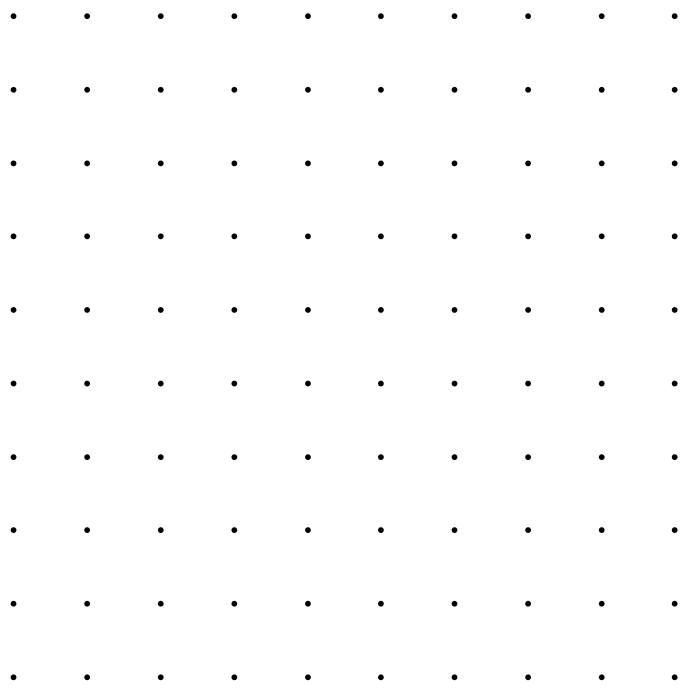
Out[296]=



In[297]:=

```
Graphics[Table[Point[{x, y}], {x, 10}, {y, 10}]]
```

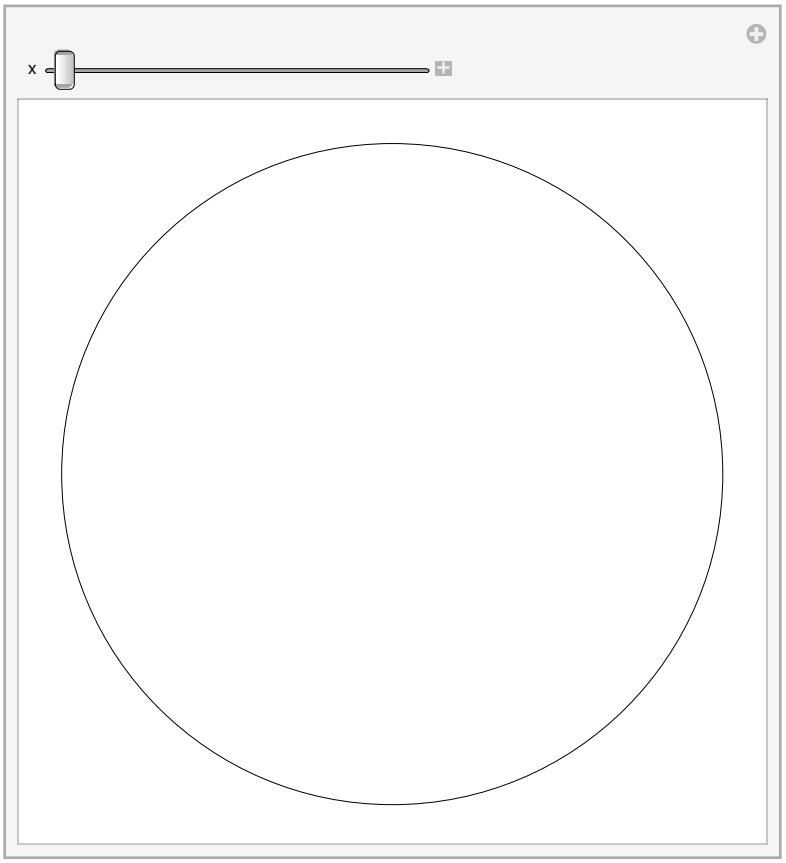
Out[297]=



In[298]:=

```
Manipulate[Graphics[Table[Circle[{0, 0}, r], {r, 1, x}]], {x, 1, 20, 1}]
```

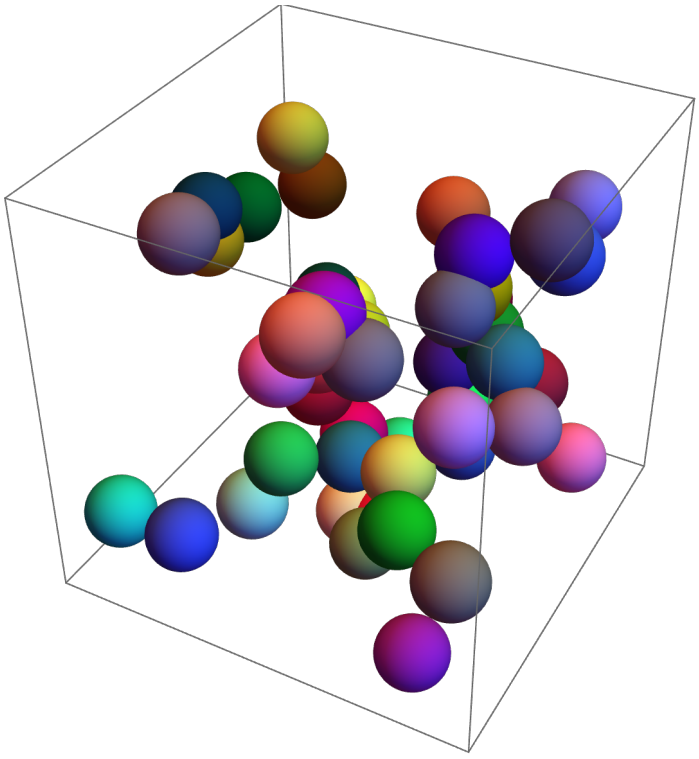
Out[298]=



In[299]:=

```
Graphics3D[Table[Style[Sphere[RandomInteger[10, 3]], RandomColor[]], 50]]
```

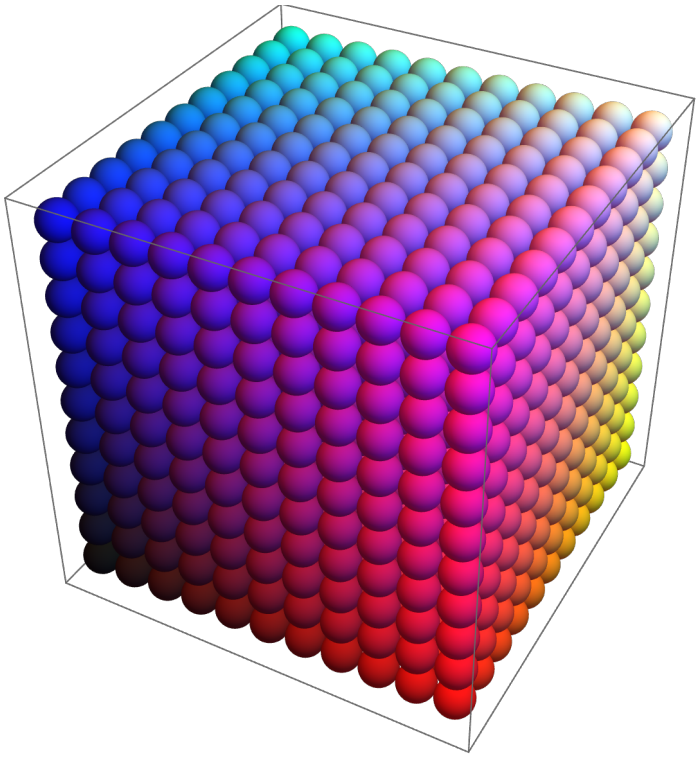
Out[299]=



In[300]:=

```
Graphics3D[Table[Style[Sphere[{x, y, z}, 1 / 2], RGBColor[x / 11, y / 11, z / 11]],
  {x, 11}, {y, 11}, {z, 11}]]
```

Out[300]=



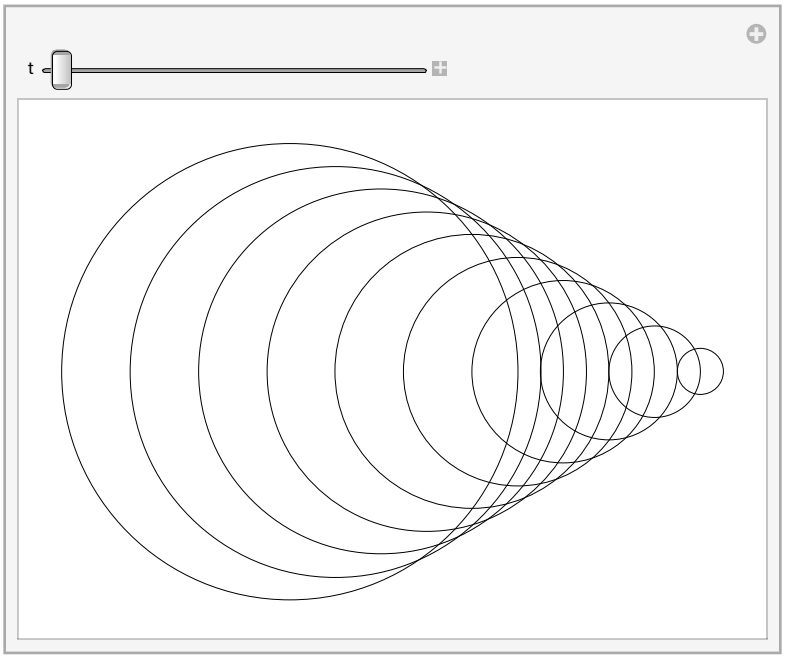
Lovely.

In[301]:=

In[302]:=

```
Manipulate[Graphics[Table[Circle[{t * x, 0}, x], {x, 1, 10}]], {t, -2, 2}]
```

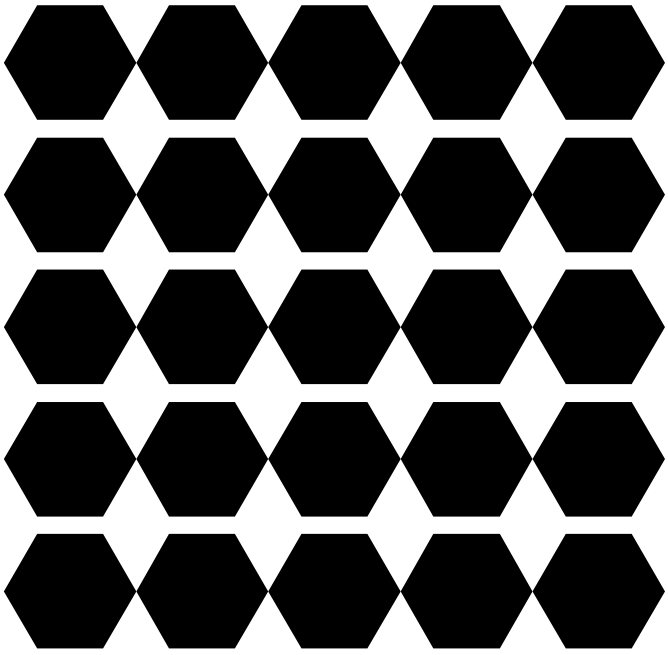
Out[302]=



In[303]:=

```
Graphics[Table[RegularPolygon[{x, y}, 1 / 2, 6], {x, 1, 5}, {y, 1, 5}]]
```

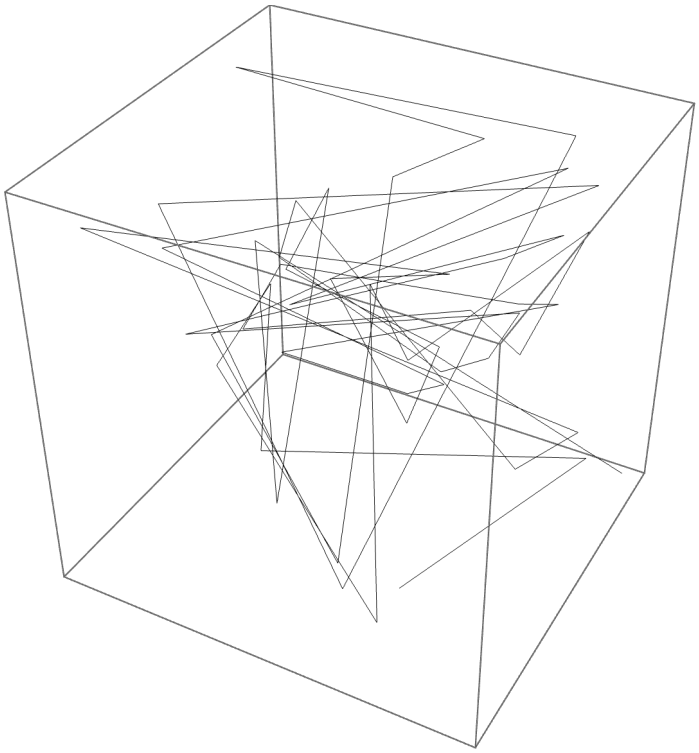
Out[303]=



In[304]:=

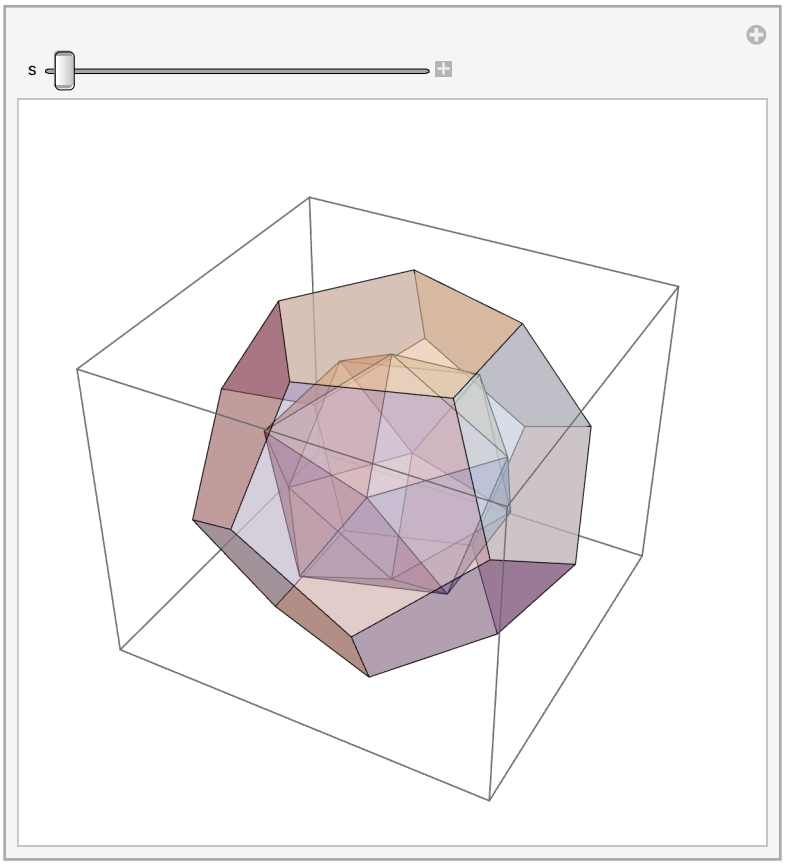
```
Graphics3D[
 Line[{Table[{RandomInteger[50], RandomInteger[50], RandomInteger[50]}, 50]}]]
```

Out[304]=



In[305]:=
```
Manipulate[Graphics3D[Style[
   {Icosahedron[{0, 0, 0}, s], Dodecahedron[{0, 0, 0}, 1]}, Opacity[0.5]]], {s, 1, 2}]
```

Out[305]=



Exercises from EIWL3 Section 14

In[306]:=
```
UnitConvert[4.5 lb, "Kilograms"]
```

Out[306]=
```
2.04117 kg
```

In[307]:=
```
UnitConvert[60.25 mi/h, "Kilometers per hour"]
```

Out[307]=
```
96.963 km/h
```

In[308]:=
```
UnitConvert[Eiffel Tower BUILDING[total height], "Miles"]
```
Out[308]=
```
0.205052 mi
```

In[309]:=
```
Mount Everest MOUNTAIN[elevation] / Eiffel Tower BUILDING[total height]
```
Out[309]=
```
26.8147
```

In[310]:=
```
Earth PLANET[mass] / Moon PLANETARY MOON[mass]
```
Out[310]=
```
81.3
```

In[311]:=
```
CurrencyConvert[¥2500., $]
```
Out[311]=
```
$16.44
```

In[312]:=
```
UnitConvert[35 oz + 0.25 sh tn + 45 lb + 9 stone, "Kilograms"]
```
Out[312]=
```
305.353 kg
```

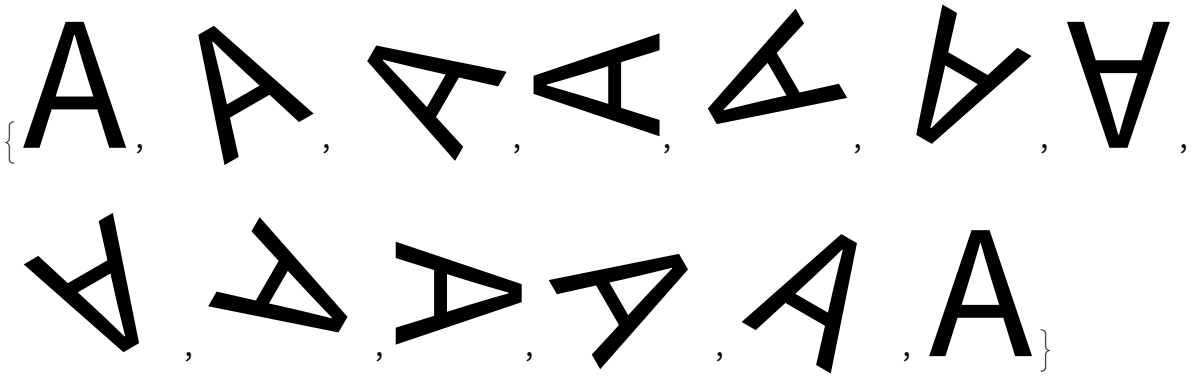
In[313]:=
```
UnitConvert[EntityValue[planets PLANETS, "DistanceFromEarth"], "Light minutes"]
```
Out[313]=
```
{11.4198 light minutes, 3.66412 light minutes,
 0. light minutes, 6.19672 light minutes, 39.2366 light minutes,
 87.3811 light minutes, 162.484 light minutes, 255.37 light minutes}
```

In[314]:=
```
Rotate["hello", 180 Degree]
```
Out[314]=
```
ollɐɥ
```

In[315]:=

```
Table[Rotate[Style["A", 100], x Degree], {x, 0, 360, 30}]
```

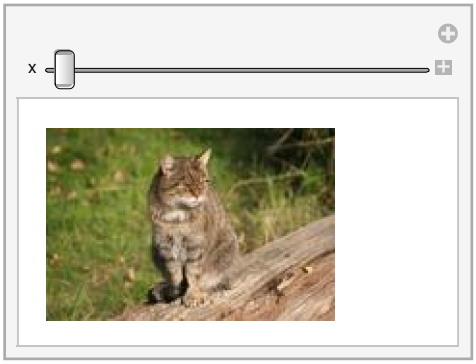
Out[315]=



In[316]:=

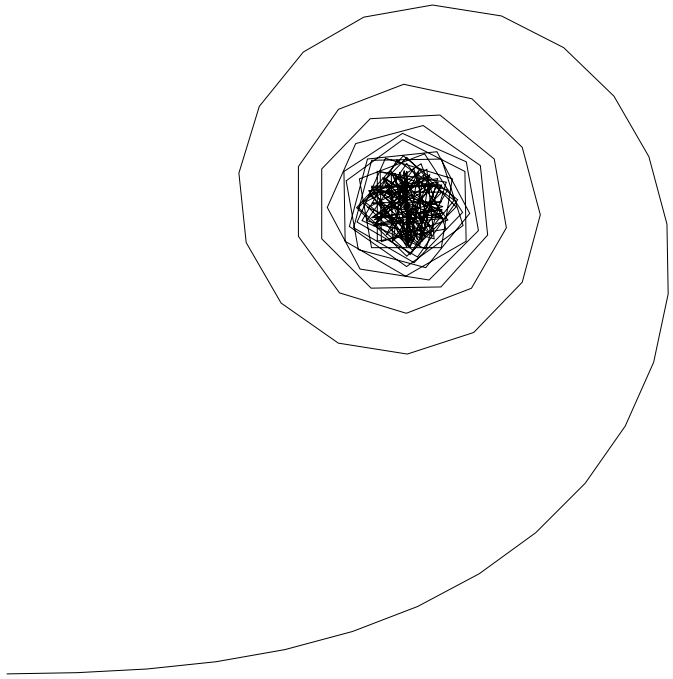
```
Manipulate[Rotate[ domestic cat SPECIES SPECIFICATION ["Image"], x Degree], {x, 0, 180}]
```

Out[316]=



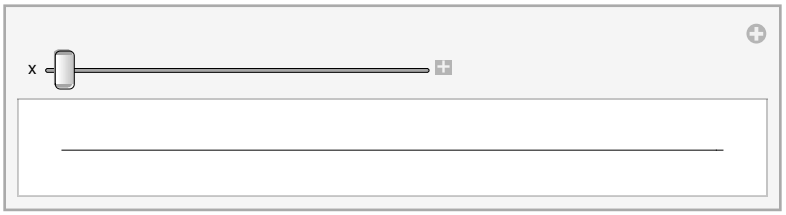
In[317]:=
```
Graphics[Line[AnglePath[Range[180] Degree]]]
```

Out[317]=



In[318]:=
```
Manipulate[Graphics[Line[AnglePath[Table[x Degree, 100]]]], {x, 0, 360}]
```

Out[318]=



In[319]:=

```
Graphics[Line[AnglePath[IntegerDigits[2^10000]*30 Degree]]]
```

Out[319]=