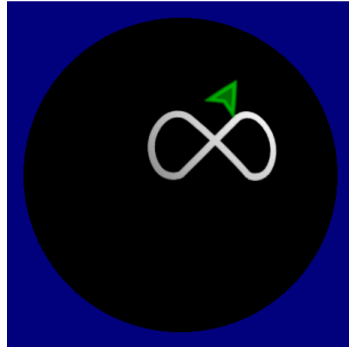
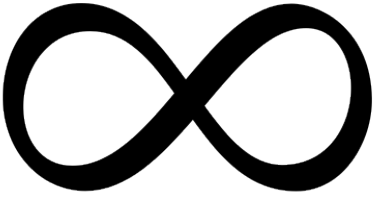


**\*\* extra credit for calculating lengths/angles and not just using guess and check**

## Infinity



```
right 45
forward 30

repeat 20 {
  forward 0.5
  right 4
}

repeat 40 {
  forward 0.5
  right 2
}

repeat 20 {
  forward 0.5
  right 4
}

right 22
forward 30

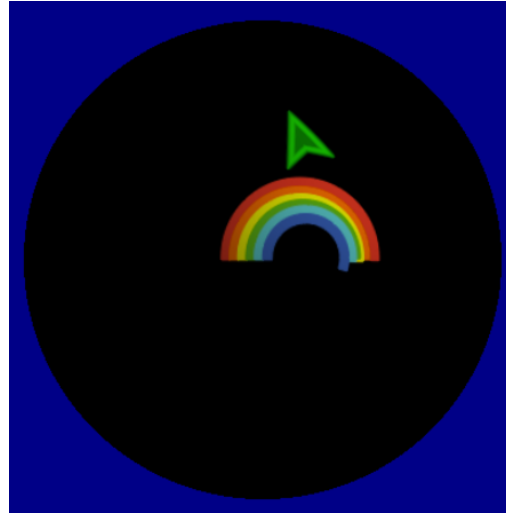
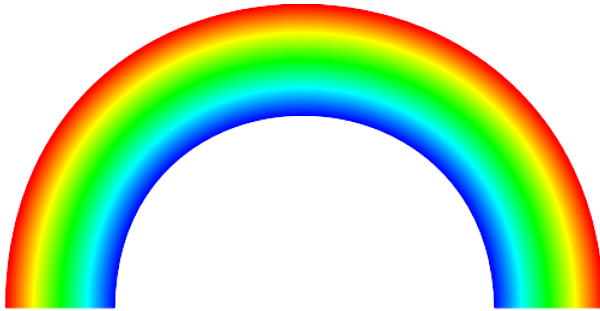
repeat 20 {
  forward 0.5
  left 4
}

repeat 40 {
  forward 0.5
  left 2
}

repeat 20 {
  forward 0.5
  left 4
}

setposition [30,20]
```

## Rainbow



```
set color red
repeat 58 {
  forward 1
  right 3
}
```

```
setposition [0,2]
setheading [0]
```

```
set color orange
repeat 51 {
  forward 1
  right 3.45
}
```

```
setposition [0,4]
setheading [0]
```

```
set color yellow
repeat 46 {
  forward 1
  right 3.9
}
```

```
setposition [0,6]
setheading [0]
```

```
set color green
repeat 41 {
  forward 1
  right 4.35
}
```

```
setposition [0,8]
setheading [0]
```

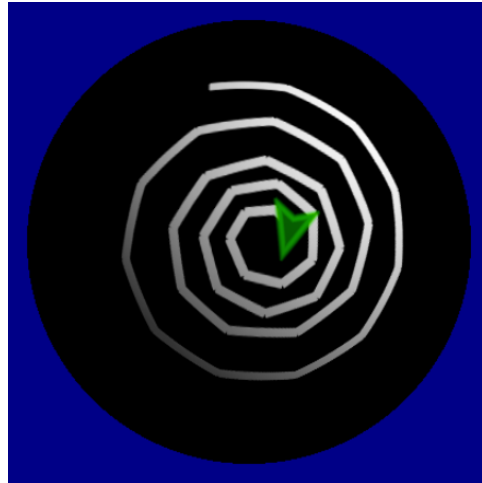
```
set color cyan
repeat 37 {
  forward 1
  right 4.95
}
```

```
setposition [0,10]
setheading [0]
```

```
set color blue
repeat 30 {
  forward 1
  right 6
}
```

```
setposition [30,20]
```

## Spiral: Long form



right 90  
forward 20  
right 20  
forward 20  
right 21  
forward 20  
right 22  
forward 20  
right 23  
forward 20  
right 24  
forward 20  
right 25  
forward 20  
right 26  
forward 20  
right 27  
forward 20  
right 28  
forward 20  
right 29  
forward 20  
right 30  
forward 20  
right 31  
forward 20  
right 32  
forward 18  
right 33  
forward 18  
right 34  
forward 18  
right 35  
forward 18  
right 36

forward 16  
right 37  
forward 16  
right 38  
forward 16  
right 39  
forward 16  
right 40  
forward 16  
right 41  
forward 16  
right 42  
forward 14  
right 43  
forward 14  
right 44  
forward 14  
right 45  
forward 14  
right 46  
forward 14  
right 47  
forward 12  
right 48  
forward 12  
right 49  
forward 12  
right 50  
forward 10  
right 51  
forward 10  
right 52  
forward 10  
right 53  
forward 8  
right 54  
forward 8  
right 55  
forward 6  
right 56

## Spiral: Short form



```
x = 20
```

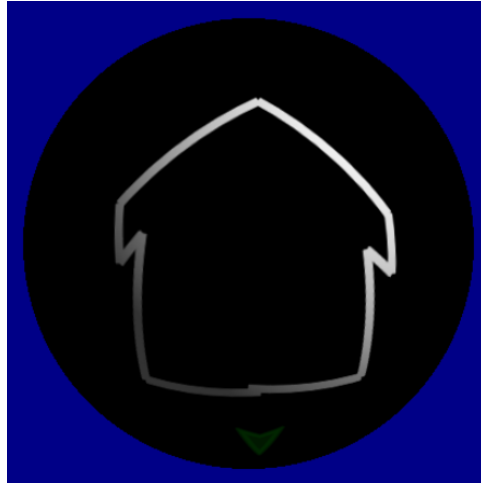
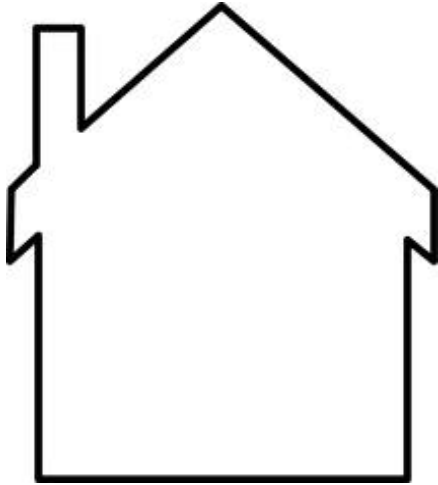
```
a = 20
```

```
right 90
```

```
repeat 60 {  
  forward x  
  right a  
  x = x - 0.33  
  a = a + 0.5  
}
```

```
penup  
setheading 180  
forward 50
```

## Chubby House



```
setheading 180  
penup  
forward 40
```

```
pendown  
setheading 95  
forward 30  
left 82  
forward 35
```

```
right 135  
forward 10  
left 130  
forward 15
```

```
left 35  
forward 45  
left 65  
forward 45
```

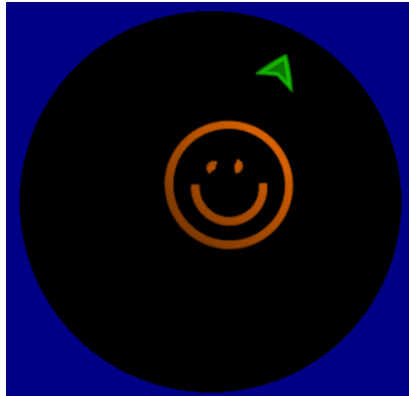
```
left 45  
forward 15  
left 135  
forward 10
```

```
right 145  
forward 40
```

```
left 80  
forward 30
```

```
penup  
right 92  
forward 20
```

# Smiley



```
set color orange
repeat 120 {
  forward 1
  right 3
}

setposition [0,8]
setheading 180

repeat 34 {
  forward 1
  left 5.5
}

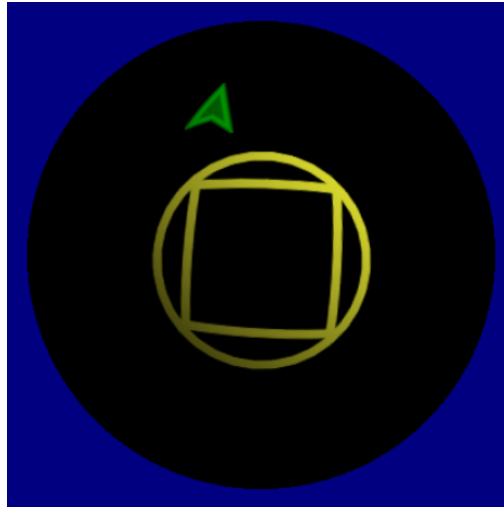
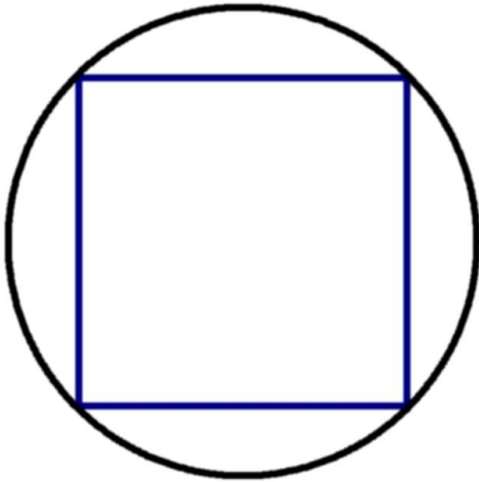
setposition [6, 14]
repeat 12 {
  forward 0.5
  left 30
}

setposition [5, 24]
repeat 12 {
  forward 0.5
  left 30
}

setposition [40,40]
```



## Square in a Circle



```
setposition [0,0]
setheading 0

set pensize 2

repeat 33 {
  set color yellow
  forward 5
  right 10
}

setposition [21,8]
setheading 85
forward 36

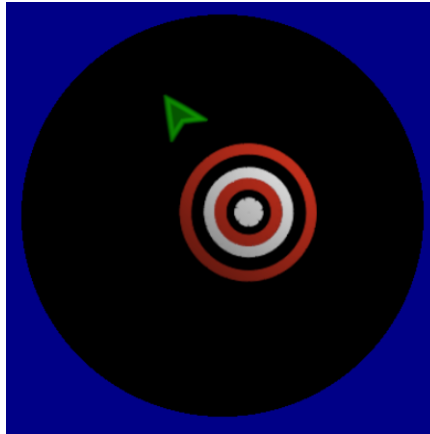
right 85
forward 36

right 85
forward 36

right 85
forward 36

penup
forward 20
```

## Target



```
setposition [0,4]
setposition [0,4]
setheading 0
```

```
set color red
set pensize 3
```

```
repeat 60 {
  forward 2
  right 6
}
```

```
setposition [0,11]
setheading 0
```

```
set color white
set pensize 3
```

```
repeat 40 {
  forward 2
  right 10
}
```

```
setposition [0,14]
setheading 0
```

```
set color red
set pensize 3
```

```
repeat 30 {
  forward 2
}
```

```
    right 14
  }

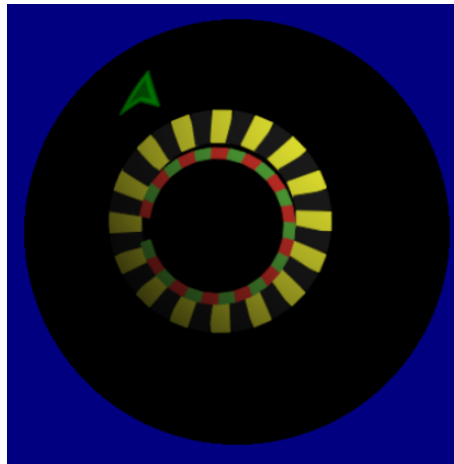
  setposition [0,20]
  setheading 0

  set color white
  set pensize 3.5

  repeat 25 {
    forward 2
    right 50
  }

  setposition [30,0]
```

## Dart Board



```
setposition [0,4]
setheading 0
```

```
set pensize 10
```

```
repeat 18 {
  set color yellow
  forward 5
  right 10
  set color 1
  forward 5
  right 10
}
```

```
setposition [3,10]
setheading 0
```

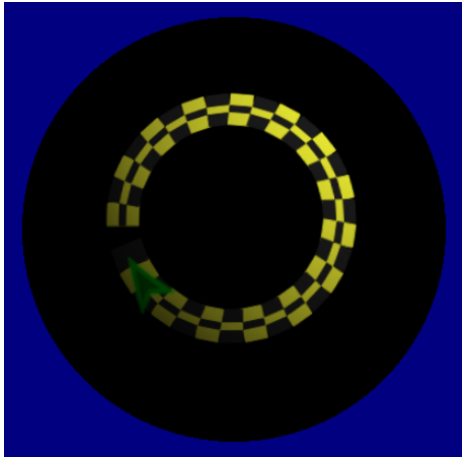
```
set pensize 3
```

```
right 12.75
```

```
repeat 13 {
  set color red
  forward 4.5
  right 12.3
  set color green
  forward 4.5
  right 12.3
}
```

```
setposition [40,0]
```

## Yellow Chain



```
setposition [0,4]
setheading 0
```

```
set pensize 10
```

```
repeat 15 {
  set color yellow
  forward 6
  right 10
  set color 1
  forward 6
  right 10
}
```

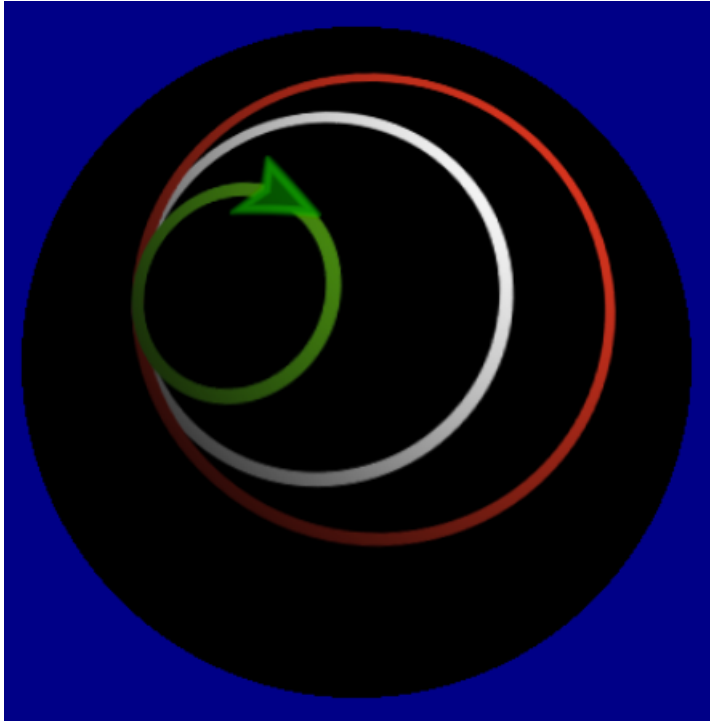
```
setposition [0,12]
setheading 0
```

```
setposition [0,4]
setheading 0
```

```
set pensize 2
```

```
repeat 14 {
  set color 1
  forward 6
  right 10
  set color yellow
  forward 6
  right 10
}
```

# Hoops



```
repeat 100 {  
  forward 2  
  right 3  
}
```

```
setposition [0,0]  
setheading 0
```

```
set color red  
repeat 90 {  
  forward 3  
  right 3  
}
```

```
setposition [0,0]  
setheading 0
```

```
set color green  
repeat 120 {  
  forward 1  
  right 3  
}
```