

## Dividing a circle into parts of equal area

### *A design activity*

#### **Instructions**

The diameter of this circle has been divided into ten equal parts.

Now draw curves that consist of two semicircles: one above the diameter, the other below the diameter.

Draw the circles above the diameter first:

- The first semicircle would have a radius of one part, centred on the first dot.
- The second semicircle would have a radius of two parts, centred on the second dot.
- Repeat for a third and fourth time.

Repeat this process for circles below the diameter, but start at the other side of the circle.

Each of the regions bounded by two successive curves is exactly  $\frac{1}{5}$  of the circle.

#### **Credit**

This design was first seen on squareCircleZ:

<http://www.squarecirclez.com/blog/equal-areas-of-a-circle-gives-nice-art/1079>

which references CTK Insights:

<http://www.mathteacherctk.com/blog/?p=8>

See these sites for more details.

