

## SEGMENTED BOWLS - BASIC FORMULAS AND CONCEPTS

A **CIRCLE** CONTAINS 360 DEGREES

**CIRCUMFERENCE:** EQUALS DIAMETER MULTIPLIED BY pi (3.1416)

Therefore, if the diameter you want is 9 inches, the circumference would be:

$$9 \times 3.1416 = 28.2744 \text{ inches or approximately } 28 \frac{1}{4} \text{ inches circumference}$$

**DIAMETER:** EQUALS CIRCUMFERENCE DIVIDED BY pi (3.1416)

Therefore, if the circumference of a segmented ring is 18 inches, the diameter would be:

$$18 / 3.1416 = 5.729 \text{ inches or slightly over } 5 \frac{1}{4} \text{ inches diameter}$$

**SEGMENT LENGTH:** EQUALS CIRCUMFERENCE DIVIDED BY NUMBER OF SEGMENTS

Therefore, if the circumference is 37.6992 (almost  $37 \frac{3}{4}$  inches) and you want a 12 segment ring, the segment length would be:

$$37.7 / 12 = 3.1417 \text{ inches (slightly more than } 3 \frac{1}{8} \text{ inches)}$$

**SEGMENT ANGLE:** EQUALS 360 DEGREES DIVIDED BY THE NUMBER OF SEGMENTS DIVIDED BY 2

Therefore, if you want a 12 segment ring, the angle cut at each end of the segment would be:

$$360 \text{ degrees} / 12 \text{ segments} / 2 = 15 \text{ degree angles}$$

## APPROXIMATE RING DIAMETER BASED ON SEGMENT LENGTH:

GENERAL RULE OF THUMB: EACH ADDITIONAL  $\frac{1}{4}$  INCH OF SEGMENT LENGTH WILL INCREASE RING DIAMETER BY 1 INCH

Therefore:

$1 \frac{1}{4}$  inch segments =  $4 \frac{1}{2}$  inch ring diameter

$1 \frac{1}{2}$  inch segments =  $5 \frac{1}{2}$  inch ring diameter

$1 \frac{3}{4}$  inch segments =  $6 \frac{1}{2}$  inch ring diameter

2 inch segments =  $7 \frac{1}{2}$  inch ring diameter

$2 \frac{1}{4}$  inch segments =  $8 \frac{1}{2}$  inch ring diameter

And so forth: