$$Z_i = (a\, Z_{i-1} + c) \bmod m$$

Let's starts with $a=2$, $c=0$, $Z_0 = 1$, $m=9$

Seed

$Z_i = (2 Z_{i-1}) \bmod 9$

$Z_1 = 2 \bmod 9 = 2$

$Z_2 = (2 \times 2) \bmod 9 = 4$

$Z_3 = (2 \times 4) \bmod 9 = 8$

$Z_4 = (2 \times 8) \bmod 9 = 7$

$Z_5 = (2 \times 7) \bmod 9 = 5$

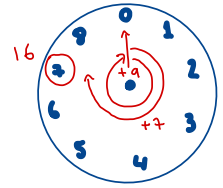
$Z_6 = (2 \times 5) \bmod 9 = 1$

Period

$Z_7 = (2 \times 1) \bmod 9 = 2$

$Z_8 = (2 \times 2) \bmod 9 = 4$

Ex. 16 mod 9



$U_1 = 2/9 = 0,22$

$U_2 = 4/9 = 0,44$

$U_3 = 8/9 = 0,88$

$U_4 = 7/9 = 0,77$

$U_5 = 5/9 = 0,55$

$U_6 = 1/9 = 0,11$

$U_7 = 2/9 = 0,22$