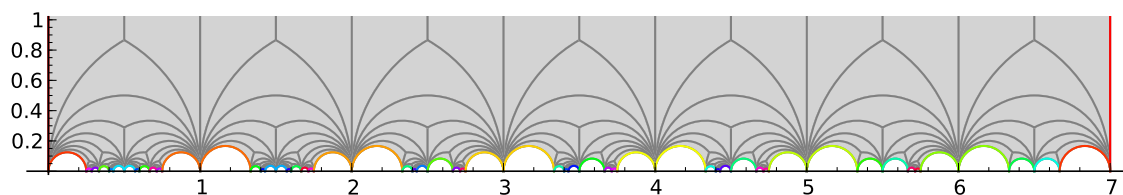


GUIDE TO MATH 341 ALGEBRA III: GROUPS

(UPDATED: SPRING 2013 IMIN CHEN)

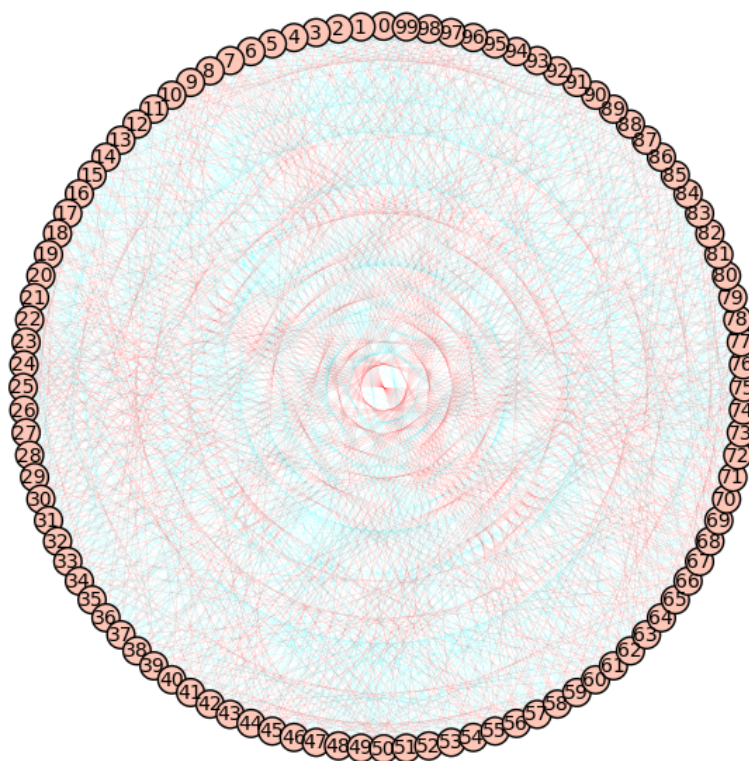
PREREQUISITE: MATH 340 OR 342 OR 332

GROUPS = SYMMETRY = BEAUTY



$$x^3y + y^3z + z^3x = 0$$

$$PSL_2(F_7)$$



$$|M| = 2^{46} \cdot 3^{20} \cdot 5^9 \cdot 7^6 \cdot 11^2 \cdot 13^3 \cdot 17 \cdot 19 \cdot 23 \cdot 29 \cdot 31 \cdot 41 \cdot 47 \cdot 59 \cdot 71$$

$$j = 1/q + 744 + 196884 q + 21493760 q^2 + 864299970 q^3 + 20245856256 q^4 + \dots$$