Supplemental material for Math 4130, HW 11

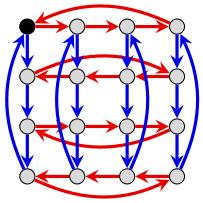
#1: The distinct ways to collapse the Cayley graph of

$$C_4 \rtimes C_4 = \langle a, b \mid a^4 = b^4 = abab^{-1} = 1 \rangle$$

and the corresponding relation(s) added, if the result is a group.

$a = 1$

$b = 1$



$a^4 = 1$

$b^4 = 1$

$abab^{-1} = 1$

$C_4 \rtimes C_4$ *is the largest group satisfying these relations*