





which is a group of order 2187 and the derived subgroup

$$\langle W' = (123456789)(10\ 18\ 17\ 16\ 15\ 14\ 13\ 12\ 11), \\ (10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18)(19\ 27\ 26\ 25\ 24\ 23\ 22\ 21\ 20) \rangle$$

Which is a group of order 81 and it isomorphic to

$$C_9 \times C_9 = \langle (123456789), (10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18) \rangle$$

which is also a finite group of order 81.

#### 4. Conclusion

We proved with examples how derived subgroup and direct product of groups were embedded into wreath products.

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