Chapter 4
Conclusion.

We consider graphs $P_n(P_m)$ and $C_n(P_m)$. In this research, we obtain the following results:

4.1 $P_n(P_1) \cong P_n$ for all positive integer n.

4.2 Let Γ be a spanning elementary subgraph of graph G If each component of graph G is K_2 then $e(\Gamma) = c(\Gamma) = \frac{v(\Gamma)}{2}$

4.3 For positive integer $n, m \geq 1$

$$\det(A(P_n(P_m)) = \begin{cases} 0 & \text{if nm is odd,} \\ (-1)^{\frac{nm}{2}} & \text{if nm is even.} \end{cases}$$

4.4 $C_n(P_1) \cong C_n$ for all integer $n \geq 3$.

4.5 For positive integers $n \geq 3, m \geq 1$

$$\det(A(C_n(P_m)) = \begin{cases} (-1)^{\frac{nm}{2}} & \text{if m is even,} \\ 2(-1)^{\frac{nm+n-2}{2}} & \text{if m is odd and n is odd,} \\ 2(-1)^{\frac{nm}{2}}[1-(-1)^{\frac{n}{2}}] & \text{if m is odd and n is even.} \end{cases}$$