

# NOTACIÓN CIENTIFICA

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CIRCUITOS ELÉCTRICOS Y ELECTRÓNICOS  
TECNOLOGIA SUPERIOR EN ELECTROMECHANICA  
ULEAM



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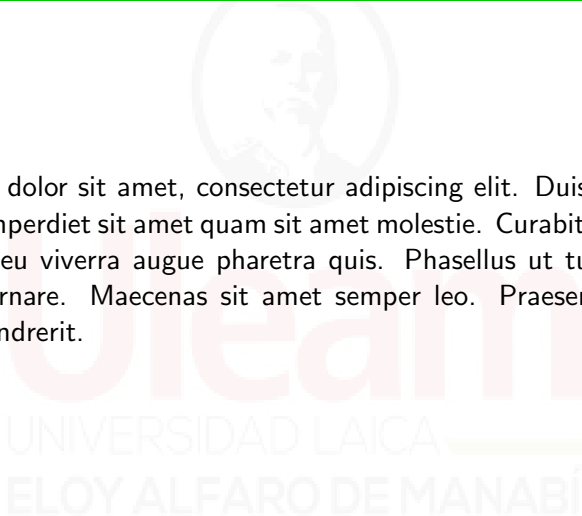
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# Introducción

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# Difiniciones

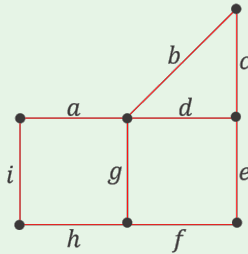
## Definition 2.1

A set  $M \subseteq E(G)$  is an *edge dominating set* of  $G$  if every  $u \in E(G) \setminus M$  is adjacent to some  $v \in M$ . The *edge domination number* of  $G$ , denoted by  $\gamma_e(G)$ , is the minimum cardinality of an edge dominating set of  $G$ . Any edge dominating set of  $G$  with cardinality  $\gamma_e(G)$  is referred to as a  $\gamma_e$ -set of  $G$ .

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# Definiciones

The sets  $M_1 = \{a, c, f\}$ ,  $M_2 = \{d, h\}$ , and  $M_3 = \{a, e, g, h\}$  are edge dominating sets of  $G$  in Figure 1.5. Moreover,  $M_2 = \{d, h\}$  is a minimum edge dominating set of  $G$ . Thus,  $\gamma_e(G) = |M_2| = 2$ .



**Figure 1:** A graph  $G$  with  $\gamma_e(G) = 2$ .

# Resultados

## Remark 3.1

*A set  $S$  is an outer-connected edge dominating set of a graph  $G$  if  $S$  is an edge dominating set such that  $H_{E(G) \setminus S}$  does not have component isomorphic to  $K_2$  or  $S = E(G)$ .*

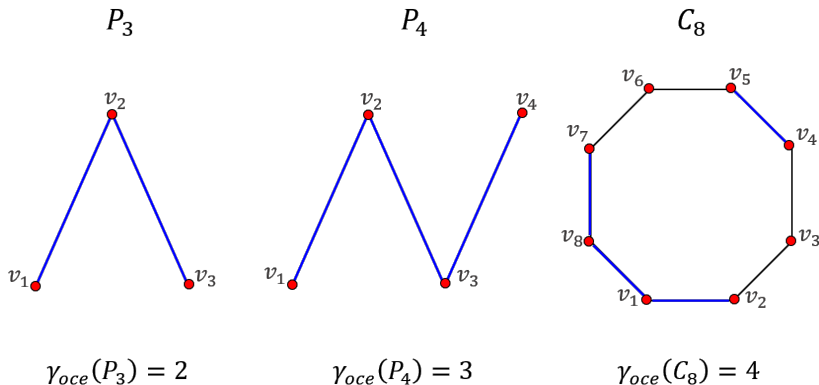
# Resultados

## Remark 3.1

*A set  $S$  is an outer-connected edge dominating set of a graph  $G$  if  $S$  is an edge dominating set such that  $H_{E(G) \setminus S}$  does not have component isomorphic to  $K_2$  or  $S = E(G)$ .*

To see this, consider graphs  $G_1 = P_3$ ,  $G_2 = P_4$ , and  $G_3 = C_8$  in Figure 2. Then,  $\gamma_{oce}(P_3) = 2$ ,  $\gamma_{oce}(P_4) = 3$ , and  $\gamma_{oce}(C_8) = 4$ .

# Results (Cont'n)



**Figure 2:** Graphs with  $\gamma_{oce}(P_3) = 2$ ,  $\gamma_{oce}(P_4) = 3$ , and  $\gamma_{oce}(C_8) = 4$ .



# Recomendaciones

The following problems are suggested for further study:

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*Gracias!*