

# Pelabelan total (a, d)- busur anti ajaib pada gabungan graf gabungan graf korona dan gabungan graf prisma

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## Abstrak

Misalkan  $G_{(a,d)}$  adalah sebuah graf dengan  $n$  simpul dan  $m$  busur dari  $G_{(a,d)}$ . Pelabelan total (a, d)-busur anti ajaib ((a, d)-PTBAA) dari sebuah graf  $G_{(a,d)}$  adalah sebuah pemetaan satu-satu  $f$  dari  $V(G_{(a,d)})$  ke himpunan  $\{1, 2, \dots, n+m\}$  sedemikian hingga himpunan bobot busur  $\{w_1, w_2, \dots, w_m\}$  sama dengan  $\{1, 2, \dots, n+m\}$  untuk suatu bilangan bulat  $a > 0$  dan  $d \geq 0$ . Jika  $w_1, w_2, \dots, w_m = \{1, 2, \dots, n+m\}$  maka pelabelan  $f$  disebut pelabelan total super (a, d)-busur anti ajaib ((a, d)-PTSBA), dan jika  $d = 0$  maka pelabelan  $f$  disebut juga pelabelan total busur ajaib (PTBA). Pada tesis ini dibangun suatu konstruksi (a, d)-PTBAA pada gabungan  $m$  graf korona  $K_n$  dan gabungan  $m$  graf prisma  $P_n$ .

Let  $G_{(a,d)}$  is a graph with  $n$  vertices and  $m$  edges of  $G_{(a,d)}$ . An (a, d)-edge antimagic total labeling ((a, d)-EAT labeling) of a  $G_{(a,d)}$  graph is defined as a one-to-one mapping  $f$  from  $V(G_{(a,d)})$  onto the set  $\{1, 2, \dots, n+m\}$ , so that the set of weight  $\{w_1, w_2, \dots, w_m\}$  is equal to  $\{1, 2, \dots, n+m\}$  for some integer  $a > 0$  and  $d \geq 0$ . If  $w_1, w_2, \dots, w_m = \{1, 2, \dots, n+m\}$  then the labeling  $f$  is called a super (a, d)-edge antimagic total labeling ((a, d)-SEAT labeling), and if  $d = 0$  then the labeling  $f$  is also called a total edge antimagic labeling (TEAL). In this thesis a construction of (a, d)-EAT labeling on the union of  $m$  corona graphs  $K_n$  and the union of  $m$  prism graphs  $P_n$  is constructed.

$K_n$  and  $P_n$  isomorphic for  $n \geq 2$  and  $n \geq 2$ , and the union of  $m$  prism graphs  $P_n$  isomorphic for  $n \geq 2$ ,  $n \geq 2$  and  $n \geq 2$ . Let  $G_{(a,d)}$  is a graph with  $n$  vertices and  $m$  edges of  $G_{(a,d)}$ . An (a, d)-edge antimagic total labeling ((a, d)-EAT labeling) of a  $G_{(a,d)}$  graph is defined as a one-to-one mapping  $f$  from  $V(G_{(a,d)})$  onto the set  $\{1, 2, \dots, n+m\}$ , so that the set of weight  $\{w_1, w_2, \dots, w_m\}$  is equal to  $\{1, 2, \dots, n+m\}$  for some integer  $a > 0$  and  $d \geq 0$ . If  $w_1, w_2, \dots, w_m = \{1, 2, \dots, n+m\}$  then the labeling  $f$  is called a super (a, d)-edge antimagic total labeling ((a, d)-SEAT labeling), and if  $d = 0$  then the labeling  $f$  is also called a total edge antimagic labeling (TEAL). In this thesis a construction of (a, d)-EAT labeling on the union of  $m$  corona graphs  $K_n$  and the union of  $m$  prism graphs  $P_n$  is constructed.

Let  $a > 0$  and  $d \in \mathbb{N}$ . If  $d = 1, 2, \dots$ , then  $f$  labeling is called super  $(a, d)$ -edge antimagic total labeling (super  $(a, d)$ -EAT labeling) and when  $d = 0$  then  $f$  labeling is called edge magic total labeling (EMT labeling). In this thesis was constructed  $(a, d)$ -EAT labeling on union of isomorphic corona  $C_n \times C_m$ ;  $C_n \times C_m$ ;  $C_n \times C_m$  graphs for  $d = 0$  and  $d = 2$ , and union of isomorphic prisms  $C_n \times C_m$ ;  $C_n \times C_m$  graphs for  $d = 0, 1$  and  $d = 2$ .