The weight $w(v)$ of a vertex $v \in V(G)$ under an edge labeling $g : E \to \{1, 2, \ldots, |E|\}$ is the sum of the labels of edges incident to the vertex $v$.

A connected graph $G = (V, E)$ is said to be $(a, d)$-antimagic (K. Wagner and R. Bodendiek, 1993) if there exist positive integers $a$, $d$ and bijection $g : E(G) \to \{1, 2, \ldots, |E(G)|\}$ such that the induced mapping $\delta_g : V(G) \to W$ is also a bijection, where $W = \{w(v) : v \in V(G)\} = \{a, a + d, \ldots, a + (|V(G)\ | - 1)d\}$ is the set of weights of vertices.

The following papers deal with $(a, d)$-antimagic labelings.


$(a, d)$-vertex-antimagic total labelings

The vertex-weight $wt(x)$ of a vertex $x \in V$, under a labeling $f : V \cup E \to \{1, 2, \ldots, |V| + |E|\}$, is the sum of values $f(xy)$ assigned to all edges incident to a given vertex $x$ together with the value assigned to $x$ itself.

A bijection $f : V \cup E \to \{1, 2, \ldots, |V| + |E|\}$ is called an $(a, d)$-vertex-antimagic total labeling of $G$ if the set of vertex-weights of all vertices in $G$ is $\{a, a + d, a + 2d, \ldots, a + (|V| - 1)d\}$, where $a > 0$ and $d \geq 0$ are two fixed integers.

Such labeling is said to be super if the vertices of $G$ receive the labels $1, 2, \ldots, |V|$.

The following papers deal with the $(a, d)$-vertex-antimagic total labelings.


