

Pelabelan Simpul Antiajaib Lokal pada Graf Perkalian Korona Dua Lintasan = Local Antimagic Vertex Coloring of Corona Product Graph Two Paths

Setiawan, author

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20525526&lokasi=lokal>

Abstrak

Misalkan $G=(V(G),E(G))$ adalah graf dengan himpunan simpul $V(G)$ dan himpunan busur $E(G)$. Misalkan $f \in \{1,2,\dots,|E(G)|\}$ suatu pemetaan bijektif. Untuk setiap simpul $u \in V(G)$, bobot dari simpul u adalah $w(u)=|E(u)|$, dimana $E(u)$ adalah himpunan busur yang bersisian dengan u . Jika untuk setiap $u, v \in V(G)$ berlaku $w(u)w(v) = f$ maka f disebut pelabelan antiajaib dari G . Selanjutnya, f disebut pelabelan antiajaib lokal jika untuk $u, v \in V(G)$ dengan u dan v bertetangga, maka $w(u)w(v) = f$. Pelabelan antiajaib lokal memunculkan sifat pewarnaan simpul dimana simpul u diberi warna berdasar bobot $w(u)$. Bilangan kromatik antiajaib lokal graf G , dinotasikan $\chi_{la}(G)$ adalah banyaknya warna minimum pada pelabelan simpul yang ditimbulkan oleh pelabelan antiajaib lokal. Operasi perkalian korona dari dua graf G dan H , dinotasikan dengan $G \odot H$, adalah graf yang dibentuk dari graf G dan graf H dengan menyalin graf H sebanyak $|V(G)|$, sebut $H_1, H_2, \dots, H_{|V(G)|}$ selanjutnya ditambahkan busur sehingga semua simpul di H_i bertetangga dengan simpul x_i di G , untuk $1 \leq i \leq |G|$. Tesis ini membahas bilangan kromatik antiajaib lokal graf perkalian korona dua lintasan, yaitu $\chi_{la}(P_n \odot P_k)$, dimana $k=2,3,5$. Hasil penelitian menunjukkan bahwa bilangan kromatik pelabelan simpul antiajaib lokal, $\chi_{la}(P_n \odot P_k)$, untuk $k=2,3,5$ adalah $\chi_{la}(P_n \odot P_2)=6$ untuk $n \geq 4$, $\chi_{la}(P_n \odot P_3)=6$, untuk $n \geq 4$ and $\chi_{la}(P_n \odot P_5)=7$, untuk $n \geq 5$.

Enable Ginger

Cannot connect to Ginger. Check your internet connection or reload the browser.

Disable in this text field

Rephrase current sentence

Edit in Ginger

Enable Ginger

main"><gdiv class="ginger-floatingG-bar-tool-tooltip">Cannot connect to Ginger Check your internet connection
or reload the browser</gdiv></gdiv><gdiv class="ginger-floatingG-enabled-main"><gdiv class="ginger-floatingG-bar"><gdiv class="ginger-floatingG-bar-tool ginger-floatingG-bar-tool-disable"><ga></ga><gdiv class="ginger-floatingG-bar-tool-tooltip">Disable in this text field</gdiv></gdiv><gdiv class="ginger-floatingG-bar-tool ginger-floatingG-bar-tool-rephrase ginger-floatingG-bar-tool-rephrase_big-circle"><ga class="ginger-floatingG-bar-tool-rephrase__btn" id="ginger__floatingG-bar-tool-rephrase__btn">Rephrase</ga><gdiv class="ginger-floatingG-bar-tool-tooltip ginger-floatingG-bar-tool-tooltip_rephrase">Rephrase current sentence</gdiv></gdiv><gdiv class="ginger-floatingG-bar-tool ginger-floatingG-bar-tool-mistakes"><ga></ga><gdiv class="ginger-floatingG-bar-tool-tooltip">Edit in Ginger</gdiv></gdiv></gdiv></gdiv><gdiv class="ginger-floatingG-contentPopup"><gdiv class="ginger-floatingG-contentPopup-wrap"><ga class="ginger-floatingG-contentPopup-close"><x</ga><gdiv class="ginger-floatingG-contentPopup-frame"><iframe scrolling="no"></iframe></gdiv></gdiv></gdiv></gdiv></p><p><gdiv id="ginger-floatingG-container" style="position: absolute; top: 0px; left: 0px;"><gdiv class="ginger-floatingG ginger-floatingG-closed" style="display: none;"><gdiv class="ginger-floatingG-disabled-main"><gdiv class="ginger-floatingG-bar-tool-tooltip">Enable Ginger</gdiv></gdiv><gdiv class="ginger-floatingG-offline-main"><gdiv class="ginger-floatingG-bar-tool-tooltip">Cannot connect to Ginger Check your internet connection
or reload the browser</gdiv></gdiv><gdiv class="ginger-floatingG-enabled-main"><gdiv class="ginger-floatingG-bar"><gdiv class="ginger-floatingG-bar-tool ginger-floatingG-bar-tool-disable"><ga></ga><gdiv class="ginger-floatingG-bar-tool-tooltip">Disable in this text field</gdiv></gdiv><gdiv class="ginger-floatingG-bar-tool ginger-floatingG-bar-tool-rephrase ginger-floatingG-bar-tool-rephrase_big-circle"><ga class="ginger-floatingG-bar-tool-rephrase__btn" id="ginger__floatingG-bar-tool-rephrase__btn">Rephrase</ga><gdiv class="ginger-floatingG-bar-tool-tooltip ginger-floatingG-bar-tool-tooltip_rephrase">Rephrase current sentence</gdiv></gdiv><gdiv class="ginger-floatingG-bar-tool ginger-floatingG-bar-tool-mistakes"><ga></ga><gdiv class="ginger-floatingG-bar-tool-tooltip">Edit in Ginger</gdiv></gdiv></gdiv></gdiv><gdiv class="ginger-floatingG-contentPopup"><gdiv class="ginger-floatingG-contentPopup-wrap"><ga class="ginger-floatingG-contentPopup-close"><x</ga><gdiv class="ginger-floatingG-contentPopup-frame"><iframe scrolling="no"></iframe></gdiv></gdiv></gdiv></gdiv></p><p><gdiv id="ginger-floatingG-container" style="position: absolute; top: 0px; left: 0px;"><gdiv class="ginger-floatingG ginger-floatingG-closed" style="display: none;"><gdiv class="ginger-floatingG-disabled-main"><gdiv class="ginger-floatingG-bar-tool-tooltip">Enable Ginger</gdiv></gdiv><gdiv class="ginger-floatingG-offline-main"><gdiv class="ginger-floatingG-bar-tool-tooltip">Cannot connect to Ginger Check your internet connection
or reload the browser</gdiv></gdiv><gdiv class="ginger-floatingG-enabled-main"><gdiv class="ginger-floatingG-bar"><gdiv class="ginger-floatingG-bar-tool ginger-floatingG-bar-tool-disable"><ga></ga><gdiv class="ginger-floatingG-bar-tool-tooltip">Disable in this text field</gdiv></gdiv><gdiv class="ginger-floatingG-bar-tool ginger-floatingG-bar-tool-rephrase ginger-floatingG-bar-tool-rephrase_big-circle"><ga class="ginger-floatingG-bar-tool-rephrase__btn" id="ginger__floatingG-bar-tool-rephrase__btn">Rephrase</ga><gdiv class="ginger-floatingG-bar-tool-tooltip ginger-floatingG-bar-tool-tooltip_rephrase">Rephrase current sentence</gdiv></gdiv><gdiv class="ginger-floatingG-bar-tool ginger-floatingG-bar-tool-mistakes"><ga></ga><gdiv class="ginger-floatingG-bar-tool-tooltip">Edit in Ginger</gdiv></gdiv></gdiv></gdiv><gdiv class="ginger-floatingG-

contentPopup"><gdiv class="ginger-floatingG-contentPopup-wrap"><ga class="ginger-floatingG-contentPopup-close"></ga><gdiv class="ginger-floatingG-contentPopup-frame"><iframe scrolling="no"></iframe></gdiv></gdiv></gdiv></gdiv></p><p><gdiv id="ginger-floatingG-container" style="position: absolute; top: 0px; left: 0px;"><gdiv class="ginger-floatingG ginger-floatingG-closed" style="display: none;"><gdiv class="ginger-floatingG-disabled-main"><gdiv class="ginger-floatingG-bar-tool-tooltip">Enable Ginger</gdiv></gdiv><gdiv class="ginger-floatingG-offline-main"><gdiv class="ginger-floatingG-bar-tool-tooltip">Cannot connect to Ginger Check your internet connection
or reload the browser</gdiv></gdiv><gdiv class="ginger-floatingG-enabled-main"><gdiv class="ginger-floatingG-bar"><gdiv class="ginger-floatingG-bar-tool ginger-floatingG-bar-tool-disable"><ga></ga><gdiv class="ginger-floatingG-bar-tool-tooltip">Disable in this text field</gdiv></gdiv><gdiv class="ginger-floatingG-bar-tool ginger-floatingG-bar-tool-rephrase ginger-floatingG-bar-tool-rephrase_big-circle"><ga class="ginger-floatingG-bar-tool-rephrase__btn" id="ginger__floatingG-bar-tool-rephrase__btn">Rephrase</ga><gdiv class="ginger-floatingG-bar-tool-tooltip ginger-floatingG-bar-tool-tooltip_rephrase">Rephrase current sentence</gdiv></gdiv><gdiv class="ginger-floatingG-bar-tool ginger-floatingG-bar-tool-mistakes"><ga></ga><gdiv class="ginger-floatingG-bar-tool-tooltip">Edit in Ginger</gdiv></gdiv></gdiv></gdiv><gdiv class="ginger-floatingG-contentPopup"><gdiv class="ginger-floatingG-contentPopup-wrap"><ga class="ginger-floatingG-contentPopup-close"></ga><gdiv class="ginger-floatingG-contentPopup-frame"><iframe scrolling="no"></iframe></gdiv></gdiv></gdiv></gdiv></p><p><gdiv id="ginger-floatingG-container" style="position: absolute; top: 0px; left: 0px;"><gdiv class="ginger-floatingG ginger-floatingG-closed" style="display: none;"><gdiv class="ginger-floatingG-disabled-main"><gdiv class="ginger-floatingG-bar-tool-tooltip">Enable Ginger</gdiv></gdiv><gdiv class="ginger-floatingG-offline-main"><gdiv class="ginger-floatingG-bar-tool-tooltip">Cannot connect to Ginger Check your internet connection
or reload the browser</gdiv></gdiv><gdiv class="ginger-floatingG-enabled-main"><gdiv class="ginger-floatingG-bar"><gdiv class="ginger-floatingG-bar-tool ginger-floatingG-bar-tool-disable"><ga></ga><gdiv class="ginger-floatingG-bar-tool-tooltip">Disable in this text field</gdiv></gdiv><gdiv class="ginger-floatingG-bar-tool ginger-floatingG-bar-tool-rephrase ginger-floatingG-bar-tool-rephrase_big-circle"><ga class="ginger-floatingG-bar-tool-rephrase__btn" id="ginger__floatingG-bar-tool-rephrase__btn">Rephrase</ga><gdiv class="ginger-floatingG-bar-tool-tooltip ginger-floatingG-bar-tool-tooltip_rephrase">Rephrase current sentence</gdiv></gdiv><gdiv class="ginger-floatingG-bar-tool ginger-floatingG-bar-tool-mistakes"><ga></ga><gdiv class="ginger-floatingG-bar-tool-tooltip">Edit in Ginger</gdiv></gdiv></gdiv></gdiv><gdiv class="ginger-floatingG-contentPopup"><gdiv class="ginger-floatingG-contentPopup-wrap"><ga class="ginger-floatingG-contentPopup-close"></ga><gdiv class="ginger-floatingG-contentPopup-frame"><iframe scrolling="no"></iframe></gdiv></gdiv></gdiv></gdiv></p><hr /><p><gdiv id="ginger-floatingG-container" style="position: absolute; top: 0px; left: 0px;"></gdiv></p><p><gdiv class="ginger-floatingG ginger-floatingG-closed" style="display: none;"><gdiv class="ginger-floatingG-disabled-main"><gdiv class="ginger-floatingG-bar-tool-tooltip">Enable Ginger</gdiv></gdiv><gdiv class="ginger-floatingG-offline-main"><gdiv class="ginger-floatingG-bar-tool-tooltip"></gdiv></gdiv></gdiv></gdiv></p><p><gdiv class="ginger-floatingG">$G=(V,E)$ be a graph with vertex set V and edge set E . Let $f:E\{1,2,\dots,|E|\}$ be a bijection map. For each vertex $u \in V(G)$, the weigh of vertex u is $w(u)=\sum_{e \in E(u)} w(e)$, where $E(u)$ is the set of edges incident to u . If for each $u,v \in V(G)$, $w(u)w(v)$ then f is called antimagic labelling of G . Furthermore, f is called antimagic

labelling of G if for any two adjacent vertices $u, v \in V(G)$, then $w(u)w(v)$. The local antimagic labeling induces a proper vertex coloring of G where the vertex v is assigned the color (vertex sum) $w(v)$. The local antimagic chromatic number, denoted $\chi_{la}(G)$, is the minimum number of colors taken over all colorings induced by local antimagic labelings of G . Let G and H be two graphs. The corona product graph $G \hat{\circ} H$ is obtained by taking one copy of G along with $|V(G)|$ copies of H , and via putting extra edges making the i th vertex of G adjacent to every vertex of the i th copy of H , where $1 \leq i \leq |V(G)|$. This thesis discusses the local antimagic chromatic number of corona product graph two paths, $\chi_{la}(P_n \hat{\circ} P_k)$, where $k=2,3,5$. The result showed that the chromatic number of local antimagic vertex coloring $P_n \hat{\circ} P_k$, for $k=2,3,5$ are $\chi_{la}(P_n \hat{\circ} P_2)=6$ for $n \geq 4$, $\chi_{la}(P_n \hat{\circ} P_3)=6$, for $n \geq 4$, $\chi_{la}(P_n \hat{\circ} P_5)=7$, for $n \geq 5$.

main"><gdiv class="ginger-floatingG-bar-tool-tooltip">Cannot connect to Ginger Check your internet connection
or reload the browser</gdiv></gdiv><gdiv class="ginger-floatingG-enabled-main"><gdiv class="ginger-floatingG-bar"><gdiv class="ginger-floatingG-bar-tool ginger-floatingG-bar-tool-disable"><ga></ga><gdiv class="ginger-floatingG-bar-tool-tooltip">Disable in this text field</gdiv></gdiv><gdiv class="ginger-floatingG-bar-tool ginger-floatingG-bar-tool-rephrase ginger-floatingG-bar-tool-rephrase_big-circle"><ga class="ginger-floatingG-bar-tool-rephrase__btn" id="ginger__floatingG-bar-tool-rephrase__btn">Rephrase</ga><gdiv class="ginger-floatingG-bar-tool-tooltip ginger-floatingG-bar-tool-tooltip_rephrase">Rephrase current sentence</gdiv></gdiv><gdiv class="ginger-floatingG-bar-tool ginger-floatingG-bar-tool-mistakes"><ga></ga><gdiv class="ginger-floatingG-bar-tool-tooltip">Edit in Ginger</gdiv></gdiv></gdiv></gdiv><gdiv class="ginger-floatingG-contentPopup"><gdiv class="ginger-floatingG-contentPopup-wrap"><ga class="ginger-floatingG-contentPopup-close"><x</ga><gdiv class="ginger-floatingG-contentPopup-frame"><iframe scrolling="no"></iframe></gdiv></gdiv></gdiv></gdiv></p><p><gdiv id="ginger-floatingG-container" style="position: absolute; top: 0px; left: 0px;"><gdiv class="ginger-floatingG ginger-floatingG-closed" style="display: none;"><gdiv class="ginger-floatingG-disabled-main"><gdiv class="ginger-floatingG-bar-tool-tooltip">Enable Ginger</gdiv></gdiv><gdiv class="ginger-floatingG-offline-main"><gdiv class="ginger-floatingG-bar-tool-tooltip">Cannot connect to Ginger Check your internet connection
or reload the browser</gdiv></gdiv><gdiv class="ginger-floatingG-enabled-main"><gdiv class="ginger-floatingG-bar"><gdiv class="ginger-floatingG-bar-tool ginger-floatingG-bar-tool-disable"><ga></ga><gdiv class="ginger-floatingG-bar-tool-tooltip">Disable in this text field</gdiv></gdiv><gdiv class="ginger-floatingG-bar-tool ginger-floatingG-bar-tool-rephrase ginger-floatingG-bar-tool-rephrase_big-circle"><ga class="ginger-floatingG-bar-tool-rephrase__btn" id="ginger__floatingG-bar-tool-rephrase__btn">Rephrase</ga><gdiv class="ginger-floatingG-bar-tool-tooltip ginger-floatingG-bar-tool-tooltip_rephrase">Rephrase current sentence</gdiv></gdiv><gdiv class="ginger-floatingG-bar-tool ginger-floatingG-bar-tool-mistakes"><ga></ga><gdiv class="ginger-floatingG-bar-tool-tooltip">Edit in Ginger</gdiv></gdiv></gdiv></gdiv><gdiv class="ginger-floatingG-contentPopup"><gdiv class="ginger-floatingG-contentPopup-wrap"><ga class="ginger-floatingG-contentPopup-close"><x</ga><gdiv class="ginger-floatingG-contentPopup-frame"><iframe scrolling="no"></iframe></gdiv></gdiv></gdiv></gdiv></p><p><gdiv id="ginger-floatingG-container" style="position: absolute; top: 0px; left: 0px;"><gdiv class="ginger-floatingG ginger-floatingG-closed" style="display: none;"><gdiv class="ginger-floatingG-disabled-main"><gdiv class="ginger-floatingG-bar-tool-tooltip">Enable Ginger</gdiv></gdiv><gdiv class="ginger-floatingG-offline-main"><gdiv class="ginger-floatingG-bar-tool-tooltip">Cannot connect to Ginger Check your internet connection
or reload the browser</gdiv></gdiv><gdiv class="ginger-floatingG-enabled-main"><gdiv class="ginger-floatingG-bar"><gdiv class="ginger-floatingG-bar-tool ginger-floatingG-bar-tool-disable"><ga></ga><gdiv class="ginger-floatingG-bar-tool-tooltip">Disable in this text field</gdiv></gdiv><gdiv class="ginger-floatingG-bar-tool ginger-floatingG-bar-tool-rephrase ginger-floatingG-bar-tool-rephrase_big-circle"><ga class="ginger-floatingG-bar-tool-rephrase__btn" id="ginger__floatingG-bar-tool-rephrase__btn">Rephrase</ga><gdiv class="ginger-floatingG-bar-tool-tooltip ginger-floatingG-bar-tool-tooltip_rephrase">Rephrase current sentence</gdiv></gdiv><gdiv class="ginger-floatingG-bar-tool ginger-floatingG-bar-tool-mistakes"><ga></ga><gdiv class="ginger-floatingG-bar-tool-tooltip">Edit in Ginger</gdiv></gdiv></gdiv></gdiv><gdiv class="ginger-floatingG-

contentPopup"><gdiv class="ginger-floatingG-contentPopup-wrap"><ga class="ginger-floatingG-contentPopup-close"></ga><gdiv class="ginger-floatingG-contentPopup-frame"><iframe scrolling="no"></iframe></gdiv></gdiv></gdiv></gdiv></p><p><gdiv id="ginger-floatingG-container" style="position: absolute; top: 0px; left: 0px;"><gdiv class="ginger-floatingG ginger-floatingG-closed" style="display: none;"><gdiv class="ginger-floatingG-disabled-main"><gdiv class="ginger-floatingG-bar-tool-tooltip">Enable Ginger</gdiv></gdiv><gdiv class="ginger-floatingG-offline-main"><gdiv class="ginger-floatingG-bar-tool-tooltip">Cannot connect to Ginger Check your internet connection
or reload the browser</gdiv></gdiv><gdiv class="ginger-floatingG-enabled-main"><gdiv class="ginger-floatingG-bar"><gdiv class="ginger-floatingG-bar-tool ginger-floatingG-bar-tool-disable"><ga></ga><gdiv class="ginger-floatingG-bar-tool-tooltip">Disable in this text field</gdiv></gdiv><gdiv class="ginger-floatingG-bar-tool ginger-floatingG-bar-tool-rephrase ginger-floatingG-bar-tool-rephrase_big-circle"><ga class="ginger-floatingG-bar-tool-rephrase__btn" id="ginger__floatingG-bar-tool-rephrase__btn">Rephrase</ga><gdiv class="ginger-floatingG-bar-tool-tooltip ginger-floatingG-bar-tool-tooltip_rephrase">Rephrase current sentence</gdiv></gdiv><gdiv class="ginger-floatingG-bar-tool ginger-floatingG-bar-tool-mistakes"><ga></ga><gdiv class="ginger-floatingG-bar-tool-tooltip">Edit in Ginger</gdiv></gdiv></gdiv></gdiv><gdiv class="ginger-floatingG-contentPopup"><gdiv class="ginger-floatingG-contentPopup-wrap"><ga class="ginger-floatingG-contentPopup-close"></ga><gdiv class="ginger-floatingG-contentPopup-frame"><iframe scrolling="no"></iframe></gdiv></gdiv></gdiv></gdiv></p>