A Brief Introduction to Intersection Graphs

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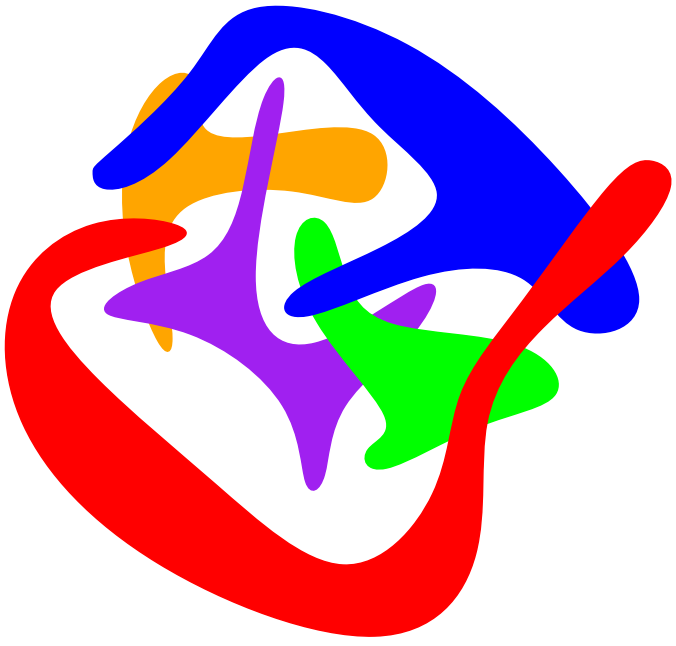
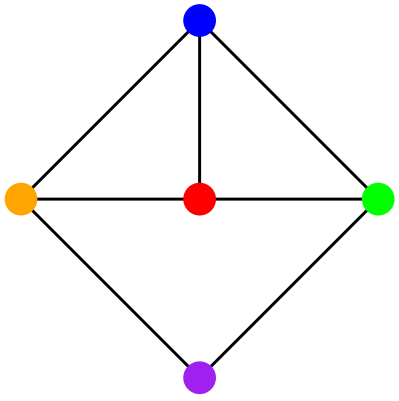
Intersection Grahs

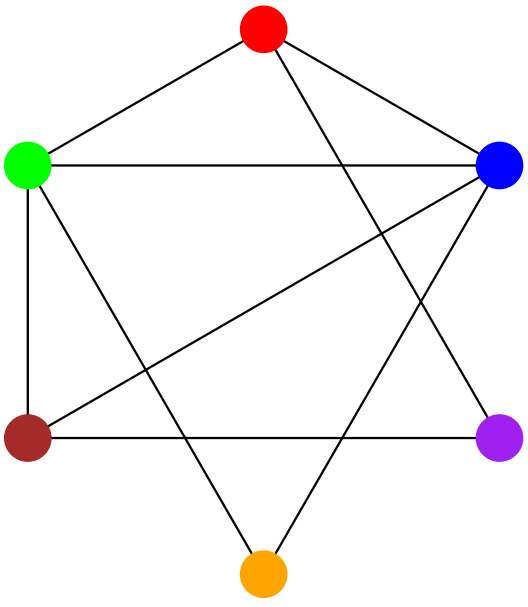


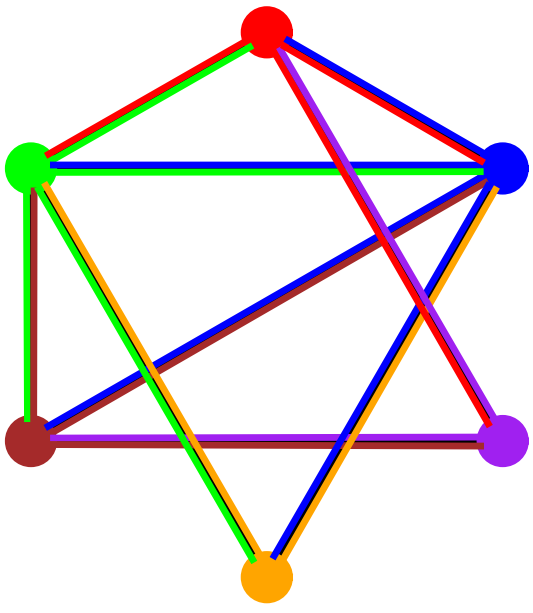


$\left\{M_u : u \in V_G\right\}$

$uv \in E_G \iff M_u \cap M_v \neq \emptyset$

Intersection Grahs





$$M_u = \{e \in E_G : u \in e\}$$

Types of Intersection Grahs

Interval Graphs = INT

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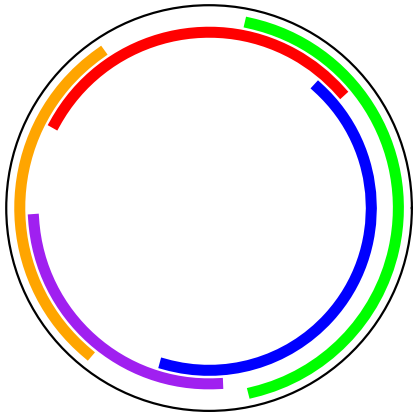
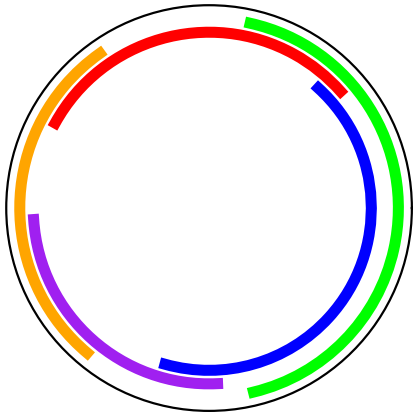


Circular Arc Graphs = CA

Types of Intersection Grahs

Interval Graphs = INT



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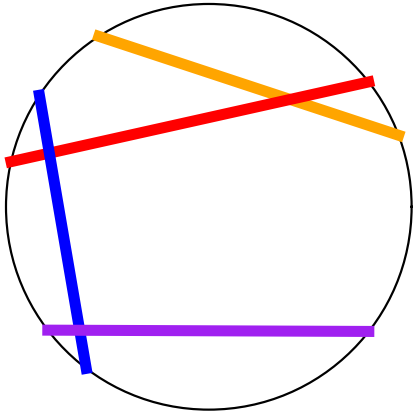

Circle Graphs = CIRC

Boxicity

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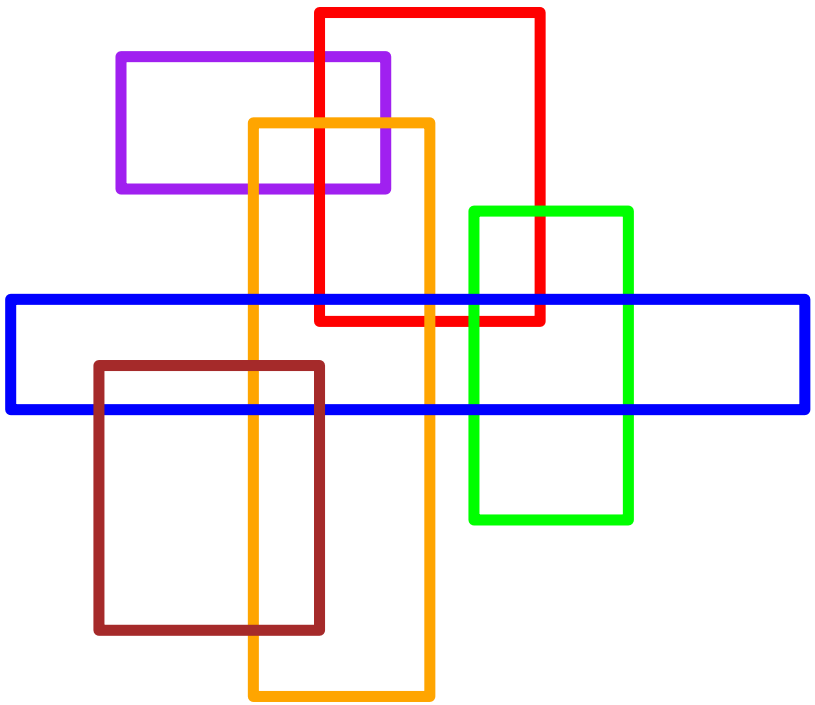
- INT = graphs with boxicity 1
- Graphs with boxicity 2



Representation of Planar Graphs

Theorem

Each planar graph can be represented as intersection graph of isoscales triangles with parallel bases.

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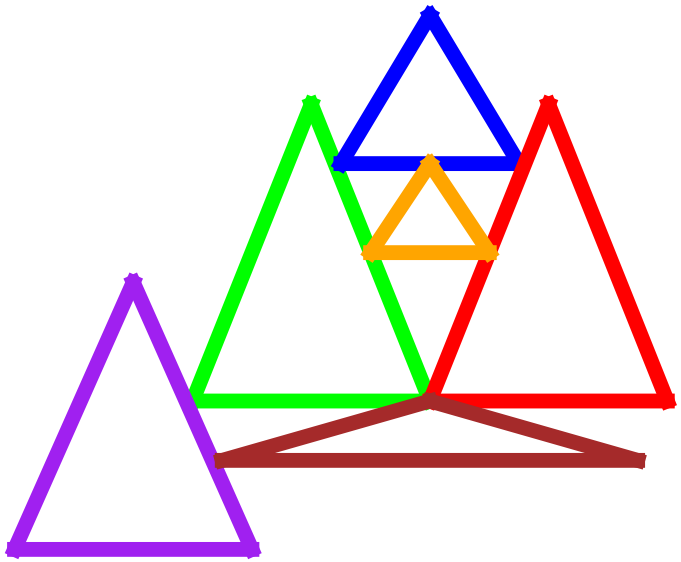

Thank you!