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$$\langle \langle \text{null}, \text{Iterator}(\text{s.roots}) \rangle, \emptyset, [] \rangle$$

*initialConf*

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$$\langle \langle \text{s}, \text{it} \rangle, \text{K}, \text{c}::\text{F} \rangle \wedge \text{!it.hasNext}$$

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$$\langle \langle \text{s}, \text{Iterator}(\text{s.neighbours}(\text{c})) \rangle, \text{K}, \text{F} \rangle$$

*discover(c)*

---

$$\langle \langle \text{s}, \text{it} \rangle, \text{K}, \text{F} \rangle \wedge \text{it.hasNext} \wedge (\text{n} = \text{it.peek}) \in \text{K}$$

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$$\langle \langle \text{s}, \text{it.next} \rangle, \text{K}, \text{F} \rangle$$

*known(n)*

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$$\langle \langle \text{s}, \text{it} \rangle, \text{K}, \text{F} \rangle \wedge \text{it.hasNext} \wedge (\text{n} = \text{it.peek}) \notin \text{K}$$

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$$\langle \langle \text{s}, \text{it.next} \rangle, \text{K} \cup \{\text{n}\}, \text{F}::\text{n} \rangle$$

*unknown(n)*

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$$\langle \langle \text{s}, \text{it} \rangle, \text{K}, [] \rangle \wedge \text{!it.hasNext}$$

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$$\langle \langle \text{s}, \text{it} \rangle, \text{K}, [] \rangle$$

*end*