Examples for pctex

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‘pctex‘ provides some useful commands for working with probabilistic circuits. The main purpose of this is reusability and harmonization of notation.

1 General/Misc

- Log-sum-exp: $\mathrm{L} \sum_{i=1}^{k} \mathrm{E}$: `$\lse{i=1}{k}$`

2 General graphs

- Graph $\mathcal{G}$: `$\graph$`
- Walk $\mathcal{W}$: `$\walk$`
- Tree $\mathcal{T}$: `$\tree$`
- Vertex set $\mathrm{V}(\mathcal{G})$: `$\vset(\graph)$`
- Edge set $\mathrm{E}(\mathcal{G})$: `$\eset(\graph)$`
- Node/nodes $\mathsf{N}, \mathbf{N}$: `$\node$`
- Child/children: $\mathsf{C}, \mathbf{C}$: `$\child$`
- Children of a node: $\mathrm{ch}(\mathsf{N})$: `$\children{\node}$`
- Parents of a node: $\mathrm{par}(\mathsf{N})$: `$\parents{\node}$`

3 Probabilistic Circuits

- Probabilistic circuit: $\mathcal{C}$: `$\pc$`
- Scope function: $\psi(\mathsf{N})$: `$\scope{\node}$`

- Sum node/nodes: $\mathsf{S}, \mathbf{S}$: `$\snode, \snodes$`
- Product node/nodes: $\mathsf{P}, \mathbf{P}$: `$\pnode, \pnodes$`
- Leaf node/nodes: $\mathsf{L}, \mathbf{L}$: `$\lnode, \lnodes$`
- Region/regions: $\mathsf{R}, \mathbf{R}$: `$\region, \regions$`
- Partition/partitions: $\mathsf{P}, \mathbf{P}$: `$\partition, \partitions$`
- Region-graph: $\mathcal{R}$: `$\rg$`

4 Tikz / Plotting

TODO