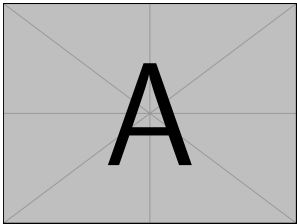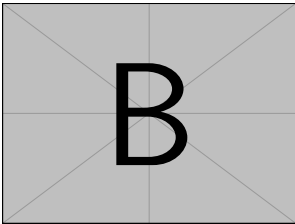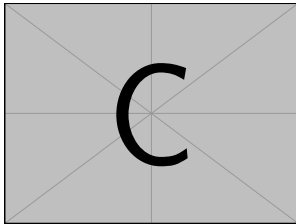Figure 1: Spanning tree matching decoder with a $[[85, 1, 7]]$ surface code. a) Three Z channel errors occur on the lattice. Exited ancillas are depicted in red. b) Two alternative MST obtained with the nearest ghost ancilla to the left (above) and to the right (below) boundary, respectively. c) Resulting $\mathcal{E}$ from the tree matching procedure.