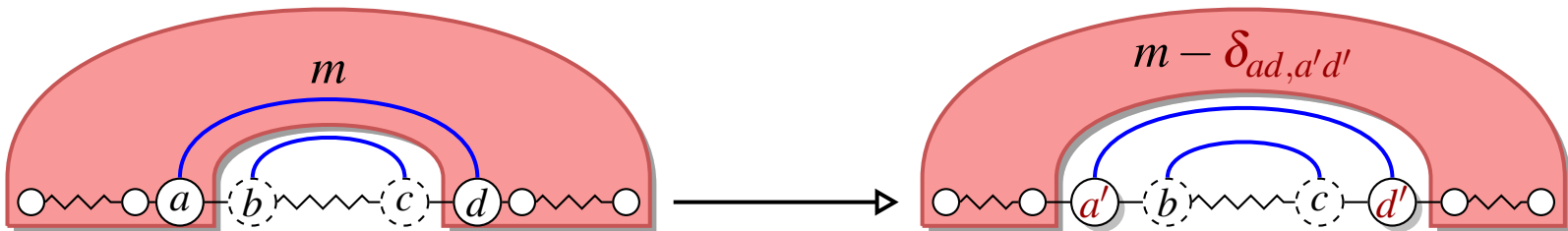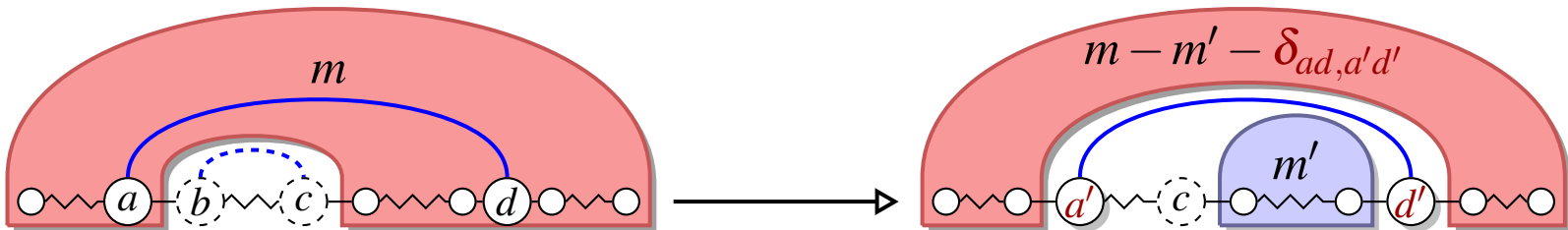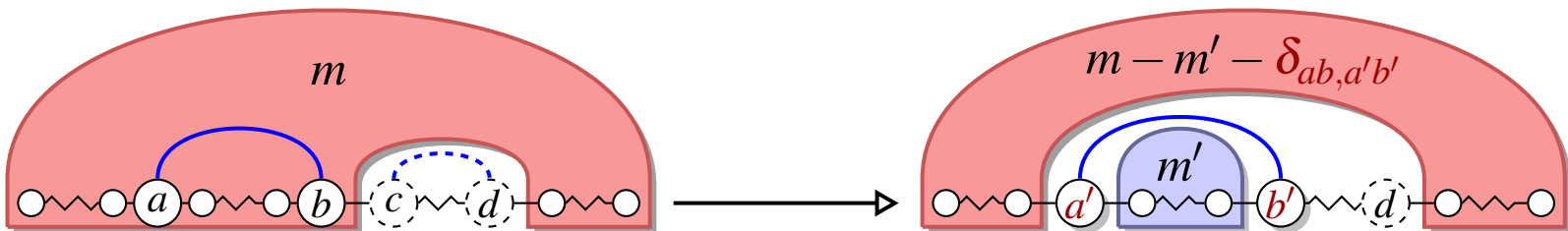**Case 1**: Next leftward position is unpaired.

Case 2: Paired extremal positions, nesting another base-pair, forming a stacking base-pair.

Case 3: Next leftward position is paired to the right, but no stacking pairs.

Case 4: Next leftward position is paired to the left.