

1. False - a larger reduction factor means higher $|\text{output}|/|\text{input}|$ ratio
2. False - in an equidepth histogram, if you have an entry with low frequency, then it's either going to get clumped together with a bunch of other low frequency entries or with 1 other high frequency entry.
3. $((A \text{ join } B) \text{ join } C) \text{ join } D$ - left deep joins only
4. Sort-Merge Join, Clustered Index Traversal
5. 2, 6
For each two table join that is not a cross-product, we take the one with the minimum I/O cost.
6. 3
We extend the two-table plans from question 1 to three-table plans, and take the one with the minimum I/O cost.