## (a) Worst Row Ordering

## (b) Best Row Ordering

Sequence
List  $A \rightarrow B \rightarrow C \rightarrow D$   $D \rightarrow C \rightarrow B \rightarrow A$   $A_{4} B_{4} C_{4} D_{4}$ Worst-Case
Bits Bits  $A_{1} B_{1} C_{1} D_{1}$   $A_{2} B_{2} C_{2} D_{2}$   $A_{3} B_{3} C_{3} D_{3}$   $A_{4} B_{4} C_{4} D_{4}$ Required
Bits  $A_{1} B_{1} C_{1} D_{1}$   $A_{2} B_{2} C_{2} D_{2}$   $A_{3} B_{3} C_{3} D_{3}$   $A_{4} B_{4} C_{4} D_{4}$