UserData 1 = 2328 + 120K + 100K+120K+96K+192K+192K = 3,148K

UserData 2 = 2328K + 168K + 16K+40K = 2,552K

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| Zip 5/90  \_\_\_\_\_\_\_  2476K - Split in User\_Data1&2  Zipcode = 10 Varchar  City = 25 Varchar  State = 2 Char  data space = (8108 - 2\*R) - ((8108 - 2\*R) \* 5/100)  data space = (8108 - 2\*R) - (405.4 - .1\*R)  data space = 8108 - 2\*R - 405.4 + .1\*R  data space = 7702.6 - 1.9\*R  Total Bytes = 43  7702.6 - 1.9\*R/ 43  179.13 - 0.044R  1.044R = 179.13  R = 171.58  ceiling(50000/172) = ceiling(291)  291\*8K blocks  = 2328K | Customer Size 20/40  -----  120K - User\_Data1  CUSTOMERID = Integer = log(500)/Log(2)/8 = 1  Firstname = 15 varchar  Lastname = 15 varchar  phoneno = 15 char  address = 35 varchar  zipcode 10 char  data space = (8108 - 2\*R) - ((8108 - 2\*R) \* 20/100)  data space = (8108 - 2\*R) - (1621.6 - .4\*R)  data space = 8108 - 2\*R - 1621.6 + .4\*R  data space = 6486.4 - 1.6\*R  Total Bytes = 93  6486.4 - 1.6\*R/ 93  69.74 - 0.017R  1.017R = 69.74  R = 68.57  ceiling(1000/15) = ceiling(15)  15\*8K blocks  = 120 Kilobytes | Orders 5/60  -----  100K - User\_Data1  OrderID = Integer = log(500)/Log(2)/8 = 1  CustomerId = Integer = log(500)/Log(2)/8 = 1  Sales\_emp\_ssn = Integer log(199,606,147)/log(2)/8 = 4  Order\_Method = 10 char  data space = (8108 - 2\*R) - ((8108 - 2\*R) \* 5/100)  data space = (8108 - 2\*R) - (405.4 - .1\*R)  data space = 8108 - 2\*R - 405.4 + .1\*R  data space = 7702.6 - 1.9\*R  Total Bytes = 19  7702.6 - 1.9\*R/ 19  405.4 - 0.001R  1.001R = 405.4  R = 405  ceiling(1000/405) = ceiling(3)  3\*8K blocks  = 24K kilobytes |

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| Product 5/90  ----  150K - User\_Data2  ProductId = Integer = Log(7000)/Log(2)/8 = 2  Prod\_Unit\_Price = Log(80)/Log(2)/8 = 1  Description = 150 varchar  data space = (8108 - 2\*R) - ((8108 - 2\*R) \* 5/100)  data space = (8108 - 2\*R) - (405.4 - .1\*R)  data space = 8108 - 2\*R - 405.4 + .1\*R  data space = 7702.6 - 1.9\*R  Total Bytes = 156  7702.6 - 1.9\*R/ 156  49.38 - 0.01R  1.010R = 49.38  R = 48.89  ceiling(1000/49) = ceiling(21)  21\*8K blocks  = 168 Kilobytes | Order\_Item 5/90  ------  50K - User\_Data2  Orderid = Integer = log(500)/Log(2)/8 = 1  ProductID = Integer = log(500)/Log(2)/8 = 1  Quantity = Integer = log(2)/Log(2)/8 = 1  data space = (8108 - 2\*R) - ((8108 - 2\*R) \* 5/100)  data space = (8108 - 2\*R) - (405.4 - .1\*R)  data space = 8108 - 2\*R - 405.4 + .1\*R  data space = 7702.6 - 1.9\*R  Total Bytes = 6  7702.6 - 1.9\*R/ 6  1283.77 - 0.32R  1.31R = 1283.77  R = 979.98  ceiling(1000/980) = ceiling(2)  2\*8K blocks  = 16 Kilobytes | Payment 20/40  -----  100K - User\_Data 2  PaymentId = Integer = log(500)/Log(2)/8 = 1  OrderID = Integer = log(500)/Log(2)/8 = 1  Car\_Exp\_Date = date = 7  card\_number = Integer = log(1851851849647260)/log(2)/8 = 7  payment\_amount = Integer = Log(80)/Log(2)/8 = 1  payment\_method = 5 varchar  data space = (8108 - 2\*R) - ((8108 - 2\*R) \* 20/100)  data space = (8108 - 2\*R) - (1621.6 - .4\*R)  data space = 8108 - 2\*R - 1621.6 + .4\*R  data space = 6486.4 - 1.6\*R  Total Bytes = 26  6486.4 - 1.6\*R/ 26  249.48 - 0.06R  1.06R = 249.48  R = 235.36  ceiling(1000/236) = ceiling(5)  5\*8K blocks  = 40 Kilobytes |

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| Employee – UserData1  -------  20/40...like Customer table  Address = 35 Varchar  Firstname = 15 Varchar  Lastname = 15 Varchar  PhoneNo = 15 Varchar  Sales\_emp\_ssn = Integer = log(199,606,147)/log(2)/8 = 4  storeid - Integer = avg(500) = 1  zipcode = char 5  ---  data space = (8108 - 2\*R) - ((8108 - 2\*R) \* 20/100)  data space = (8108 - 2\*R) - (1621.6 - .4\*R)  data space = 8108 - 2\*R - 1621.6 + .4\*R  data space = 6486.4 - 1.6\*R  Total Bytes = 93  6486.4 - 1.6\*R/ 93  69.74 - 0.017R  1.017R = 69.74  R = 68.57  ceiling(1000/15) = ceiling(15)  15\*8K blocks  = 120 Kilobytes | Store – UserData1  -----  5/90  Address = 35  phoneno= 15  regionid = int = avg(500) = 1  storename =varchar 25  zipcode = char 5  data space = (8108 - 2\*R) - ((8108 - 2\*R) \* 5/100)  data space = (8108 - 2\*R) - (405.4 - .1\*R)  data space = 8108 - 2\*R - 405.4 + .1\*R  data space = 7702.6 - 1.9\*R  Total Bytes = 84  7702.6 - 1.9\*R/ 84  91.7 - 0.022R  1.022R = 91.7  R = 89.72  ceiling(1000/90) = ceiling(12)  12\*8K blocks  = 96K kilobytes | Region – UserData1  ------  5/90  description = varchar 150  regionid = int = avg(500) = 1  regionname = vharchar 25  data space = (8108 - 2\*R) - ((8108 - 2\*R) \* 5/100)  data space = (8108 - 2\*R) - (405.4 - .1\*R)  data space = 8108 - 2\*R - 405.4 + .1\*R  data space = 7702.6 - 1.9\*R  Total Bytes = 179  7702.6 - 1.9\*R/ 179  43.03 - 0.01R  1.010R = 43.03  R = 42.6  ceiling(1000/43) = ceiling(24)  12\*8K blocks  = 192 Kilobytes |

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| ProdCat – UserData1  ------  5/90  description = varchar 150  prodcatid = int = avg(500) = 1  prodcattype = varchar 25  data space = (8108 - 2\*R) - ((8108 - 2\*R) \* 5/100)  data space = (8108 - 2\*R) - (405.4 - .1\*R)  data space = 8108 - 2\*R - 405.4 + .1\*R  data space = 7702.6 - 1.9\*R  Total Bytes = 179  7702.6 - 1.9\*R/ 179  43.03 - 0.01R  1.010R = 43.03  R = 42.6  ceiling(1000/43) = ceiling(24)  12\*8K blocks  = 192 Kilobytes |