Cse332 Worksheet Week 4: B-Trees

1. Oh no! Sauron went into the elven forest and removed some values from the (B)-trees! The leaf values are left over, but we’re missing the inner node values, and we forgot what M and L are. Using the leaf values, and the structure of the tree, fill in M, L and the inner node values.
2. Starting with an initially empty B-Tree with values of M=3 and L=2, insert values 7, 12, 6, 18, 3 and 44, in that order, and then delete 6, 44 and 8.
3. Let’s say a disk block is 4096 bytes, a key is 4 bytes, a pointer is 8 bytes and a data item is 32 bytes, find optimal M and L values for a B-Tree fit for these values.
4. Related to #3, when we represent the leaf, why do we **not** store a counter for the number of items in the leaf as part of the leaf data?