B-tree properties

- \( t \) is a parameter (give to constructor), make as big as you can so a full node (\( 2t \) children) fits on a disk page
- completely balanced, every path from root to a leaf has exactly the same \# of nodes
- every node (except root) has \( \geq t-1 \) tags/elements
- every node has \( \leq 2t-1 \) tags (\( \leq 2t \) children)
B-Trees, Part II

Review of Properties

Let $t$ be the order of the B-tree (parameter given to constructor).

**BALANCED** - all leaf nodes are at same height. So an internal node with $x$ elements has $x+1$ non-empty children.

**NODE UTILIZATION** - With the exception of root all nodes have $\geq t$ children ($\geq 2t - 1$ elements). The root has $\geq 2$ children.

All nodes have $\leq 2t$ children ($\leq 2t - 1$ elements).