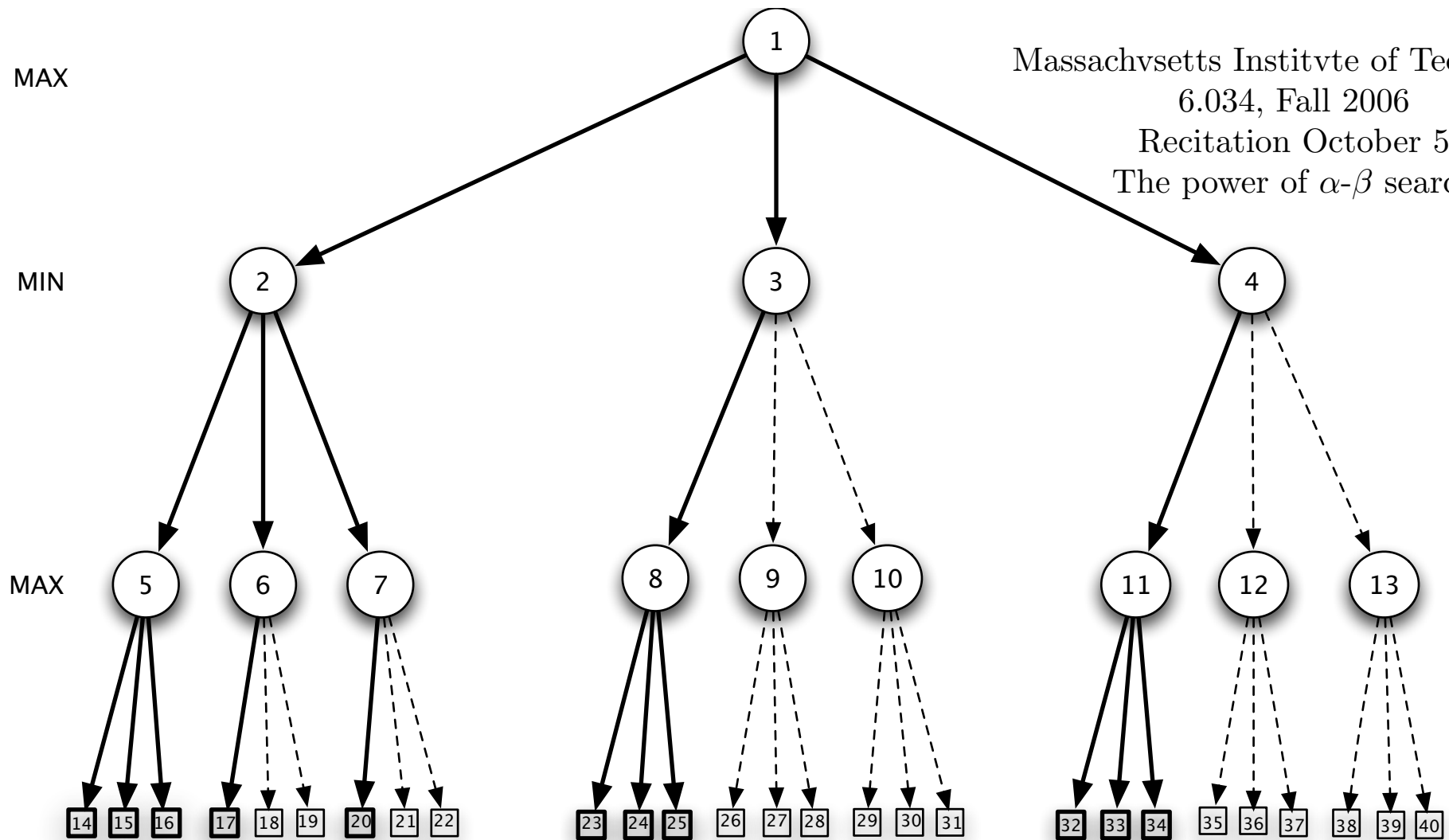




Let d = depth of tree (here, 3); b = branching factor (here, also 3)

Assume optimally ordered leaves for both max and min players (i.e., leftmost alternative is always the best move for each player at every node)

Then:

The # of static evaluations $s = b^{(d+1)/2} + b^{(d-1)/2} - 1$ for d odd;

$s = 2b^{d/2} - 1$ for d even.

In this case, we have: $3^2 + 3^1 - 1 = 11$

Thus in the best case, with $\alpha - \beta$ we reduce the number of static evaluations by the *square root* of what it was - effectively 1/2 the original branching factor.