

GAMES COURSE

HOMEWORK 9

1. Put your NAME on all pages.
2. Given that $T_0 = 0$ and $T_i = \frac{1}{2}T_{i-1} + 1$, find a formula for T_n . What is T_{1024} ?
3. Given that $T_1 = 1$ and $T_i = 2T_{i-1} + 1$, find a formula for T_n .
4. Given that $T_1 = 1$ and $T_i = 2T_{\frac{i}{2}} + 1$, find a formula for T_n .
5. Given that $T_0 = n$ and $T_i = \frac{1}{3}T_{i-1}$, find a closed formula for T_i (i.e. a formula that is a function of n but not of any other T_j).