For the recurrence equation $T(N) = aT(N/b) + f(N)$, if $af(N/b) = f(N)$, then $T(N) = \Theta(f(N)log_b N)$.

- T
- F

答案正确：2 分 创建提问

For the recurrence equation $T(N) = 8T(N/2) + N^3 logN$, we obtain $T(N) = O(N^3 logN)$ according to the Master Theorem.

F

For the recurrence equation $T(N) = aT(N/b) + f(N)$, if $af(N/b) = Kf(N)$ for some constant $K > 1$, then $T(N) = \Theta(f(N))$.

F

If devide-and-conquer strategy is used to find the closest pair of points in a plane, unless the points are sorted not only by their x coordinates but also by their y coordinates, it would be impossible to solve it in a time of $O(NlogN)$, where N is the number of points.

T

Suppose that the devide-and-conquer strategy is used to find the maximum and the minimum of N positive numbers. At each step, the problem is divided into 2 sub-problems of size $N/2$. Then the time recurrences is $T(N) = 2T(N/2) + f(N)$, where $f(N)$ is ___.

- A. $N/2$
- B. $O(1)$
- C. $\Omega(N)$
- D. $\Theta(logN)$

答案正确：1 分 创建提问