

Resolva as recorrências (Retiradas do livro do Cormem)

1. $T(n) = T(\lceil \frac{n}{2} \rceil) + 1$
2. $T(n) = T(\lfloor \frac{n}{2} \rfloor) + n$
3. $T(n) = 2T(\lfloor \frac{n}{2} \rfloor + 17) + n$
4. $T(n) = 3T(\lfloor \frac{n}{2} \rfloor) + n$
5. $T(n) = T(\frac{n}{3}) + T(\frac{n}{3}) + cn$
6. $T(n) = 4T(\frac{n}{2}) + cn$
7. $T(n) = 4T(\frac{n}{2}) + n$
8. $T(n) = 4T(\frac{n}{2}) + n^2$
9. $T(n) = 4T(\frac{n}{2}) + n^3$
10. Defina a para que $T'(n)$ seja assintoticamente mais rápida que $T(n)$, onde
$$T(n) = 7T(\frac{n}{2}) + n^2 \text{ e } T'(n) = aT'(\frac{n}{4}) + n^2$$

Resolva as recorrências (Retiradas do livro do Manber)

1. $T(n) = T(n-1) + \frac{n}{2}; T(1) = 1;$
2. $T(n) = 8T(n-1) - 15T(n-2); T(1) = 1; T(2)=4;$
3. $T(n) = 2T(\lfloor \frac{n}{2} \rfloor) + 2n \log(n); T(2) = 4;$
4. $T(n) = 143640T(\frac{n}{70}) + O(n^2); T(1) = 1;$
5. $T(n) = \max_i \{T(i)\}; T(1) = 1;$
6. $T(n) = n + \sum_{i=1}^{n-1} T(i)$
7. $T(n) = 4T(\lceil \sqrt{n} \rceil) + 1; T(2) = 1;$
8. $T(n) = 2T(\lceil \sqrt{n} \rceil) + 2n; T(2) = 1;$
9. $T(n) = T(\frac{n}{2}) + T(\lfloor \sqrt{n} \rfloor) + n; T(1) = 1; T(2) = 2;$