- 문제 2: $T(n) = T(n-1) + n$

- 문제 4: $T(n) = T\left(\frac{n}{2}\right) + 1$

$$T\left(\frac{n}{2}\right) = T\left(\frac{n}{4}\right) + 1$$

$$= T\left(\frac{n}{4}\right) + 2$$

$$\vdots$$

$$= T\left(\frac{n}{2^k}\right) + k$$

$$= T(1) + \log_2 n$$

- 문제 6: $T(n) = 2T\left(\frac{n}{2}\right) + n$

$T(n/2) = 2T(n/4) + n/2$

$= 4T(n/4) + 2n$

$\vdots$

$= 2^k T\left(n/2^k\right) + k \cdot n$

$\| \quad (k = \log_2 n)$

$= nT(1) + n\log_2 n$

$= n\log_2$

- 문제 8: $T(n) = T(n-1) + \frac{1}{n}$

$T(n-1) = T(n-2) + \frac{1}{n-1}$

$= T(n-2) + \frac{1}{n} + \frac{1}{n-1}$

$\vdots$

$= T(0) + \frac{1}{n} + \frac{1}{n-1} + \cdots + \frac{1}{1}$

$= \log n$