

**Exercise 3.2-8:**

$$\therefore k \ln k = \Theta(n)$$

$$\therefore n / \ln n = \Theta\left(\frac{k \ln k}{\ln(k \ln k)}\right) = \Theta\left(\frac{k \ln k}{\ln k + \ln \ln k}\right)$$

$$\therefore \ln k + \ln \ln k = \Theta(\ln k)$$

$$\therefore n / \ln n = \Theta\left(\frac{k \ln k}{\ln k}\right) = \Theta(k)$$

$$\therefore k = \Theta(n / \ln n)$$