

$$\begin{aligned}
 T(n) &= (\text{cost of base case}) (\# \text{ of times base case is reached}) + \sum_{i=0}^{\log_2 \frac{3}{n}} n \\
 &= (\Theta(1)) (1^{\log_2 \frac{3}{n}}) + n (\log_2 \frac{3}{n}) \\
 &= (\Theta(1)) + n (\log_2 3 - \log_2 n) \\
 &= (\Theta(1)) + n \log_2 3 - n \log_2 n
 \end{aligned}$$

From the above we can see that the highest demand is $n \log n$, such that our runtime complexity for $T(n)$ will be:

$$T(n) = \Theta(n \log n)$$