

Running time complexity of $T(n) = 3T(n/3) + 2cn$; $T(1) = 0$

B) Using Master Theorem $T(n) = aT(n/b) + f(n)$

$$a = 3$$

$$b = 3$$

$$d = 1$$

$$f(n) = 2cn$$

Because $\log_a(b) = d$, $\log_3(3) = 1$ the time complexity is $O(N \cdot \log(N))$.