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Quiz (10)

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8 Correct

2 Wrong

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8 of 10 QUESTIONS

QUESTION 8

5 marks

What is the value of following recurrence.

$T(n) = T(n/4) + T(n/2) + cn^2$
 $T(1) = c$
 $T(0) = 0$

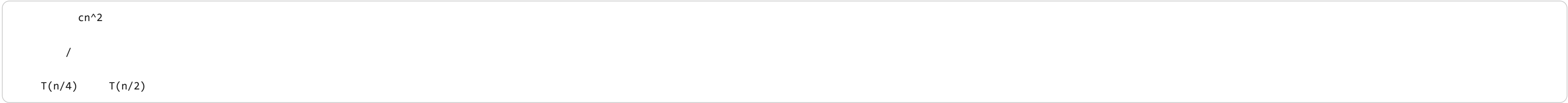
Where c is a positive constant

- ☐ $O(n^3)$
- ☒ $O(n^2)$
- ☐ $O(n^2 \text{ Log}n)$
- ☐ $O(n \text{Log}n)$

Your submitted response was correct.

Explanation

Following is the initial recursion tree for the given recurrence relation.



If we further break down the expression $T(n/4)$ and $T(n/2)$, we get following recursion tree.



Breaking down further gives us following

