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Quiz (10)

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QUESTION 9 5 marks

The solution of the recurrence relation
T(m) = T(3m / 4) + 1 is :

- θ (lg m)
- θ (m)
- θ (mlg m)
- θ (lglg m)

Your submitted response was correct.

Explanation

Given,

```
T(m)

= T(3m/4) + 1

= T(m/(4/3)) + 1
```

In this problem we use Master's Theorem:

```
T(m) = aT(m/b) + n^k logn
```

Compare both equation,

```
we get a = 1 and b = 4/3 and k=0
```

Now find (log a base b), i.e., (log 1 base 4/3), which is greater than $(4/3)^0$ And whenever, $(\log_b(a))$ and b^k is greater than answer is f(m)* log(m)

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