

# Clicker Question #1

Suppose I have a recurrence relation of the form

$$T(n) = cn + T(a) + T(b),$$

where  $a + b = n$  and  $a, b > 0$ . The respective **best-case** and **worst-case** asymptotic bounds for this kind of recurrence are:

- A.  $\Theta(n \log n)$  and  $\Theta(n \log n)$  (i.e., it's always the same answer)
- B.  $\Theta(n)$  and  $\Theta(n \log n)$
- C.  $\Theta(n \log n)$  and  $\Theta(n^2)$

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## Clicker Question #2

Suppose I have a recurrence relation of the form

$$T(n) = cn + T(a),$$

where  $0 < a < n$ . The respective **best-case** and **worst-case** asymptotic bounds for this kind of recurrence are:

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- B.  $\Theta(n)$  and  $\Theta(n \log n)$
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- D.  $\Theta(n \log n)$  and  $\Theta(n^2)$

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where  $0 < a < n$ . The respective **best-case** and **worst-case** asymptotic bounds for this kind of recurrence are:

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- B.  $\Theta(n)$  and  $\Theta(n \log n)$
- C.  $\Theta(n)$  and  $\Theta(n^2)$
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