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Collaborators: None

Problem 2-1.

(a) According to *Master Theorem*, suppose we have a recurrence of the form
$T(n) = aT(n/b) + f(n)$
In this case, $a = b = 2$, that means $n^{log_b a} = n$, while $f(n) = \sqrt{n}$, that makes
$T(n) = \Theta(n)$.

(b)

(c)

(d)

Problem 2-2.

   (a)

   (b)

   (c)

Problem 2-3.

Problem 2-4.

Problem 2-5.

   (a)

   (b)

   (c) Submit your implementation to `alg.mit.edu`.