

Solutions to Exercises (9/8/05)

Exercises on Master Methods:

$$a = 4, b = 2, n^{\log_b a} = n^{\log_2 4} = n^2$$

1. $\varepsilon = 1, T(n) = \theta(n^2)$

2. $f(n) = \theta(n^{\log_b a}), T(n) = \theta(n^2 \lg n)$

3. $\varepsilon = 1, 4(\frac{n^3}{2}) = n^3/2 \leq cn^3 ?$ *Yes for $c > 1/2$*
 $T(n) = \theta(n^3)$