please please please SAVE....
all branches lead to inconsistency

expected runtime of this object

is exponential? \text{yes} \quad \text{assuming prob of choosing bd. is } c/2. \\
(1+c)^k \# of remaining ms.

t(n) = \frac{1}{2} \cdot \frac{5}{2} \cdot \left[ \frac{3 + 2t(n-1)}{2} \right] = c + t(n-1)

\text{t(1)} = 1; \quad \Rightarrow t(n) = O(n)...

\text{notice however that if prob of choosing b-var is } c/2
\text{ then } t(n) = c + (1+c)^n \cdot \frac{1}{2} ** \text{ and }**
all branches lead to inconsistency

expected runtime of this object

is exponential? yes, assuming probability of choosing bad is $< 1/2$. 

$$(1 + C)^n \leq \# \text{ of remaining rms.}$$

$$t(n) = \frac{1}{2} \cdot \frac{5}{3} + \frac{1}{2} \cdot \left[ 3 + 2t(n-1) \right] = C + t(n-1)$$

$$t(1) = 1.$$
Pr(t > 1) = \frac{1}{8^3} + \frac{1}{2^5} + \frac{1}{2^7} + ... \\
= \sum_{i=1}^{\infty} \frac{1}{2^{2i+1}} = \frac{1}{2} \sum_{i=1}^{\infty} \frac{1}{4^i} \\
= \frac{1}{1 - \frac{1}{4}} - 1 = \frac{4}{3} - 1 = \frac{1}{3}

Pr(t > 2) = Pr(t > 1) \cdot \frac{1}{2} = \frac{1}{6} \\
Pr(t > 2^i) = Pr(t > 2^{i-1}) \cdot \frac{1}{2} = \frac{1}{3} \cdot \frac{1}{2^i} \\
\forall i < n.

Can be modeled by: