1. Which of the following is the appropriate recurrence relation for the time complexity of a recursive function that generates Fibonacci numbers?
   (3 points)

   A. $T(n)=T(n-1)+c_1$; $T(0)=0$, $T(1)=1$

   B. $T(n)=T(n/2)+c_1$; $T(0)=0$, $T(1)=1$

   ✓ C. $T(n)=T(n-1)+T(n-2)$; $T(0)=0$, $T(1)=1$

   D. $T(n)=T(n/2)+c_1 n$; $T(0)=0$, $T(1)=1$

2. Which of the following is the appropriate recurrence relation for the time complexity of a recursive function that executes Binary Search? *(3 points)*

   A. $T(n)=T(n-1)+c_1; T(1)=1$

   ✓ B. $T(n)=T(n/2)+c_1;\ T(1)=1$

   C. $T(n)=T(n-1)+c_1 n; T(1)=1$

   D. $T(n)=T(n/2)+c_1 n;\ T(1)=1$

3. Which of the following is the appropriate recurrence relation for the time complexity of a recursive function that executes Merge Sort? *(3 points)*

✓ A. $T(n)=2\times T(n/2)+c_1 n; T(1)=1$

B. $T(n)=T(n/2)+c_1$; $T(1)=1$

C. $T(n)=T(n-1)+c_1; T(1)=1$

D. $T(n)=T(n-2)+c_1 n$; $T(1)=1$