Tutorial 2

Answer the following questions and provide a short (3-4 lines max) justification for your answer:

1) A process executes the code
   fork ( );
   fork ( );
   fork ( );

   The total number of child processes created is:
   a. 3
   b. 4
   c. 7
   d. 8

2) The time taken to switch between user and kernel modes of execution be t1 while the time taken to switch between two processes be t2. Which of the following is TRUE?
   a) t1 > t2
   b) t1 = t2
   c) t1 < t2
   d) Nothing can be said about the relation between t1 and t2

3) A process executes the following segment of code:

   for(i = 1; i < = n; i++)
   fork ();

   The number of new processes created is:

   a) n
   b) ((n(n + 1))/2)
   c) $2^n - 1$
   d) $3^n - 1$

4) Which of the following actions is/are typically not performed by the operating system when switching context from process A to process B?
   a) Saving current register values and restoring saved register values for process B.
   b) Changing address translation tables.
   c) Swapping out the memory image of process A to the disk.
   d) Invalidating the translation look-aside buffer.

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