1) Calculate the **In-Place** Haar Wavelet Transform for the data $s = (8, 6, 7, 3, 1, 1, 2, 4)$  

2) Assume that the **In-Place** Haar Wavelet Transform of a sample $s = (s_0, s_1, s_2, s_3)$ produces the result $(5, 1, -2, 3)$. Apply the inverse transform to reconstruct the sample $s$.  

3) Assume that the **In-Place** Haar Wavelet Transform produces the final result $s^{(3-3)} = (5, -1, 2, 3, 4, 1, 9, 0)$.  

   a) Determine the average of the sample $s$.  
   
   b) In the array of results, identify the value of $c_1^{(3-2)}$.  