

Quiz 4

True/False - No explanation needed. (1pt for correct, 0pt - no answer, -1pt - incorrect)

1. The bubble sort algorithm is efficient if the list is already sorted in increasing order.
True/False
2. Suppose there are n men and n women that have the strictly opposite preferences, i.e. all men prefer $w_1 > w_2 > \dots > w_n$, all women prefer $m_n > m_{n-1} > \dots > m_1$. If we run the stable matching algorithm to couple them, the result is unstable, i.e. there is at least one couple who both can find a better match. True/False

Problems - Need justification. No justification means **zero**!

1. (10pts) Prove, for all positive integer n :

$$\frac{1}{2 * 5} + \frac{1}{5 * 8} + \frac{1}{8 * 11} + \dots + \frac{1}{(3n - 1) * (3n + 2)} = \frac{n}{6n + 4}$$