

Gale-Shapley Algorithm

All $a \in A$ propose to their highest preference in B .

Complexity of algorithms

$$f(n) = 1.5n^2 + 200n + 1000$$

$$g(n) = 1.5n^2$$

$$h(n) = 200n$$

$$t(n) = 1000$$

For small inputs, $t(n)$ most significant, $h(n)$ takes over and in the limit, only $g(n)$ relevant.

$$f(x) \text{ is } O(g(x))$$

\leftrightarrow

$$\exists k \forall x > k : |f(x)| \leq C|g(x)|$$