Bubble sort efficiency:

T(n) = (n – 1 – 0)\*c + (n – 1 – 1)\*c +(n – 1 – 2)\*c +… + (n – 1 – (n-3))\*c + (n – 1 – (n-2))\*c =

= c \* ((n – 1) + (n – 2) + (n – 3) + … + 4 + 3) =

= c \* (((n – 1) \* (n – 1 + 1)) / 2 – 2 – 1) =

= (n^2 \* c) / 2 - (n \* c) / 2 – 3 \* c = O(n^2)