$\frac{n(n-1)}{2} = \frac{5 \times 4}{2} = 10$

1. list of n elements

each comparrison takes two elements

and $n(n-1)$ loops occur therefore $\frac{n[n-1]}{2}$ = No. Comparrisons.

number of swaps average will be half elements already in order. therefore its number of comparrisons halfved

$$\frac{n[n-1]}{2} \times \frac{1}{2} = \frac{n[n-1]}{4}$$

4

Graph shows a quadratic graph (n^2)

where the number of swaps are arounf half of number of comparrisons