

$$= 5 + 3 \left( \frac{\left(\frac{n-2}{2}\right) \left(\frac{n}{2}\right)}{2} \right)$$

$$= 5 + 3 \left( \frac{\left(\frac{n^2 - 2n}{4}\right)}{2} \right)$$

$$= 5 + 3 \left( \frac{n^2 - 2n}{8} \right)$$

$$= 5 + \left( \frac{3n^2 - 6n}{8} \right)$$

• The highest component above is  $n^2$ , such that the runtime complexity of  $T(n)$  is:

$$\underline{T(n) = \Theta(n^2)}$$