(3.) Finding Blymomials that are upper & Lower bounds on your curve from #2. From this specify a big-O & big-Omega & what big-theta is.

Here,

From quadratic equation, we get the bounds:

↳ Upper bond (Big-O) -

In this highest order term is $O(n^2)$ from this we get $T(n) \in O(n^2)$

↳ (Big-Omega) lower bound :

In this the function is clearly bounded by a quadratic term of n.

So, from that we can get

$$T(n) \in \Omega(n^2)$$

↳ Big-Theta (Tight bound) :

Here both Big-O and Big-Omega are n^2,

So, we can conclude as

$$T(n) \in \Theta(n^2)$$