**Part 1**

**Answer**

1. **T (n) = 3T (n/2) + n =Θ(nlog23)**
2. **T (n) = 64T (n/8) − n^2(log n) = Θ ( n2log 1/n)**
3. **T (n) = 2nT (n/2) + n^n = Θ (nLogn)**
4. **T (n) = 3T (n/3) + n/2 = Θ (nLogn)**
5. **T (n) = 7T (n/3) + n^2 = Θ** [**(n^**](https://gateoverflow.in/51605/solve-this-equation-t-n-7t-n-2-n-2)**3)**