1. DP. $O(n^2)$.
2. output sensitive algorithm: let k denote the output size, $O(\frac{n^2}{k} \log \frac{n}{k} \log k)$ [2] (which is better than $O(n^2)$ when $k = \Omega(\log n \log \log n)$).
lower bound: this problem is 3sum-hard [1].

References

[1] Bartłomiej Dudek, Paweł Gawrychowski, and Tatiana Starikovskaya. All non-trivial variants of 3-ldt are equivalent. *arXiv preprint arXiv:2001.01289*, 2020.

[2] Je Erickson. Finding longest arithmetic progressions. 1999.