1. offline, reduce to sorting. $O(sort(n))$.
2. reduce to one-dimensional range reporting. static: $O(1)$ query time [1], dynamic: $O(\log\log w)$ query time [2]. but the preprocessing time is not faster than sorting.
3. divide into buckets with size $\Theta(d)$, and record the minimum and maximum value within $arr2$ in each bucket. $O(n)$.

References

[1] Stephen Alstrup, Gerth Brodal, and Theis Rauhe. Optimal static range reporting in one dimension. In *Proceedings of the thirty-third annual ACM symposium on Theory of computing*, pages 476–482, 2001.

[2] Christian Worm Mortensen, Rasmus Pagh, and Mihai Ptraçcu. On dynamic range reporting in one dimension. In *Proceedings of the thirty-seventh annual ACM symposium on Theory of computing*, pages 104–111, 2005.