Polynomial Multiplication:

**Reading**

Polynomial multiplication: Section 2.1 of [DPV08]

**References**

[DPV] Sanjoy Dasgupta, Christos Papadimitriou, and Umesh Vazirani. Algorithms (1st Edition). McGraw-Hill Higher Education. 2008.

Master Theorem:

## Reading

Master Theorem: Section 2.2 of [DPV08]

## References

[DPV] Sanjoy Dasgupta, Christos Papadimitriou, and Umesh Vazirani. Algorithms (1st Edition). McGraw-Hill Higher Education. 2008.

Sorting Problems:

## Reading

Merge sort and lower bound for comparison based sorting: Section 2.3 of [DPV08]

## If you find this lesson difficult to follow

An [elementary introduction to sorting and selection sort](https://www.khanacademy.org/computing/computer-science/algorithms/sorting-algorithms/a/sorting) at Khan Academy

## Visualizations

[Comparison based sorting algorithms](http://www.cs.usfca.edu/~galles/visualization/ComparisonSort.html) by David Galles

[sorting-algorithms.com](http://www.sorting-algorithms.com/)

## References

[DPV] Sanjoy Dasgupta, Christos Papadimitriou, and Umesh Vazirani. Algorithms (1st Edition). McGraw-Hill Higher Education. 2008.

Quick Sort:

## Reading

Quick sort: Chapter 7 of [CLRS]

## If you find this lesson difficult to follow

An [elementary introduction to quick sort](https://www.khanacademy.org/computing/computer-science/algorithms/quick-sort/a/overview-of-quicksort) at Khan Academy

## Visualizations

[sorting-algorithms.com](http://www.sorting-algorithms.com/)

## References

[CLRS] Thomas H. Cormen, Charles E. Leiserson, Ronald L. Rivest, Clifford Stein. Introduction to Algorithms (3rd Edition). MIT Press and McGraw-Hill. 2009.