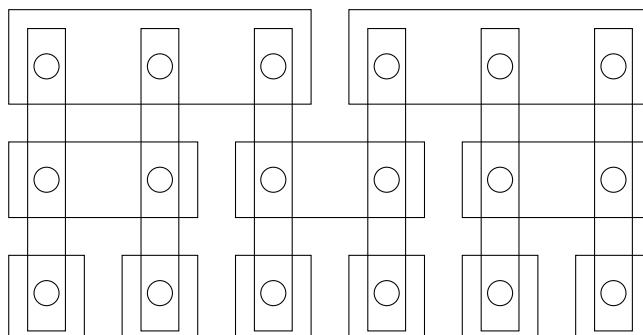


1 Approximation Algorithms

1.1 Vertex Cover

(From CLRS 35.3) Given a universe of elements, E , and a collection of subsets of E , $S = S_1, \dots, S_n$, find the minimum collection of S_i such that all E are covered (in at least one of the selected S_i).

Practice with the following example and come up with an approximation algorithm. What is the worst case approximation relative to the OPT?



1.2 Flow

<https://mcs.utm.utoronto.ca/~zingarod/373/ps/ps5.pdf>. Try out 1. Here is an example graph to help you get started:

