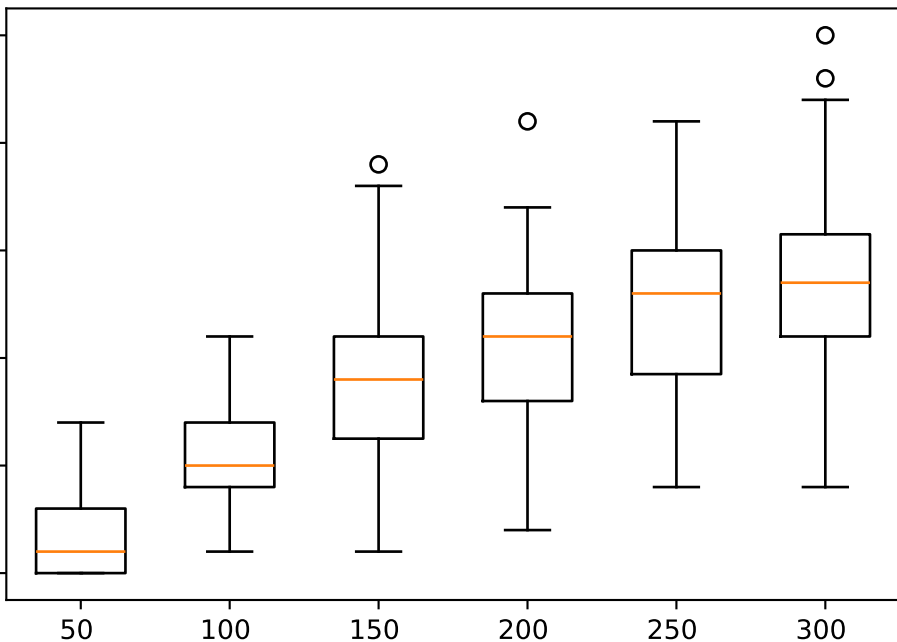


Number of elbows given pipe lengths
Search space 100^3 with a 30% obstacle ratio.

Number of elbows in pipe obtained by algorithm



Pipe length setting in problem instance