

Problem Set 6

Questions to test understanding of P/NP problems.

1

Are all decision problems in the complexity class NP?

☐ A) True

☐ B) False

2

Can optimization problems be in NP?

☐ A) Yes

☐ B) No

3

Travelling salesman problem is defined as a salesman planning to visit a bunch of cities to sell his merchandise. The salesman wants to cut costs and needs to follow a route which allows him to visit every city but at the same time is the shortest route among all possible routes. Is this problem in NP-complete?

☐ A) Yes

☐ B) No

4

If $P=NP$ is proven, will integer factorization be still in complexity class NP-intermediate?

☐ A) Yes

☐ B) No

5

NP-complete problems can't be solved at all?

☐ A) Yes

☐ B) No

CHECK ANSWERS