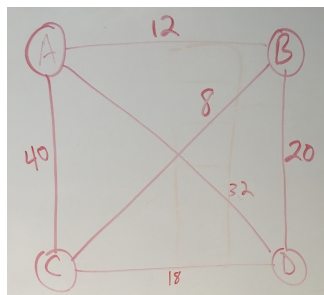**SIENA**college
Computer Science

Exhaustive Search Practice

Complete an exhaustive search to find the the optimal TSP solution for this graph.

How many possible tours are there here, where $n = 4$?

How many would there be for $n = 5$? $n = 6$?

In general?

Given the item weights and values below, use an exhaustive search to find the optimal subset of items to place in a knapsack with a capacity of 16 to maximize the value of the items chosen.

item	weight	value
1	2	20
2	5	30
3	10	50
4	5	10

subset	weight	value

Use an exhaustive search to find the optimal solution to the assignment problem for this cost matrix:

	Job 0	Job 1	Job 2	Job 3
Person 0	9	2	7	8
Person 1	6	4	3	7
Person 2	5	8	1	8
Person 3	7	6	9	4

How many assignments are possible here?

How many assignments are possible when there are n people and n jobs?