How to Find an Example

Optimality

Computer Search

- Honors Quiz: Puzzle: N
 Queens
 5 questions
- Video: N Queens: Brute Force
 Search
 10 min
- Reading: N Queens: Brute
 Force Solution Code
 10 min
- Video: N Queens:

 Backtracking: Example
 7 min
- Video: N Queens:

 Backtracking: Code
 7 min
- Reading: N Queens:

 Backtracking Solution Code

 10 min
- Honors Quiz: Puzzle: 16
 Diagonals
 3 questions
- Video: 16 Diagonals (*) 3 min
- Reading: 16 Diagonals: Code (**)
- Practice Quiz: Number of
 Solutions for the 8 Queens
 Puzzle
 1 question
- Reading: Slides (**)
 1 min

N Queens: Brute Force Solution Code

✓ Practice with Lab Sandbox

```
import itertools as it
   2
   3
        def is_solution(perm):
            for (i1, i2) in it.combinations(range(len(perm)), 2):
                if abs(i1 - i2) == abs(perm[i1] - perm[i2]):
                    return False
            return True
   9
       for perm in it.permutations(range(8)):
  10
  11
            if is_solution(perm):
  12
                print(perm)
                                                                                          Run
  13
                exit()
                                                                                          Reset
(0, 4, 7, 5, 2, 6, 1, 3)
```

✓ Completed Go to next item

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