

Fundamental Solutions to the $N + 3$ Queens Problem for $N = 8, 9$, and 10

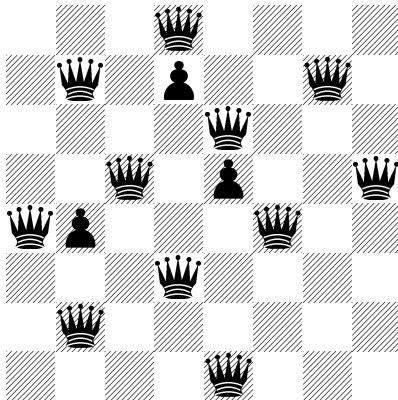
Doug Chatham

March 9, 2007

Solution 1

P: [1, 3], [3, 4], [4, 1]

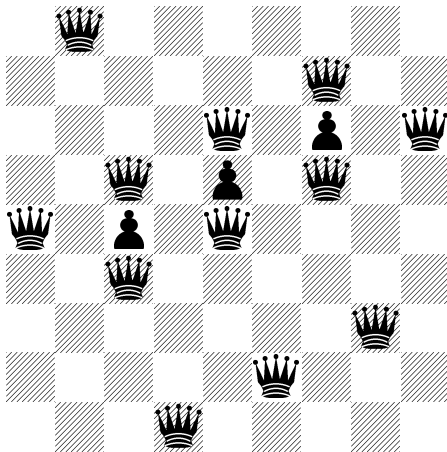
Q: [0, 3], [1, 1], [1, 6], [2, 4], [3, 2], [3, 7], [4, 0], [4, 5], [5, 3], [6, 1], [7, 4]



Solution 1

P: [2, 6], [3, 4], [4, 2]

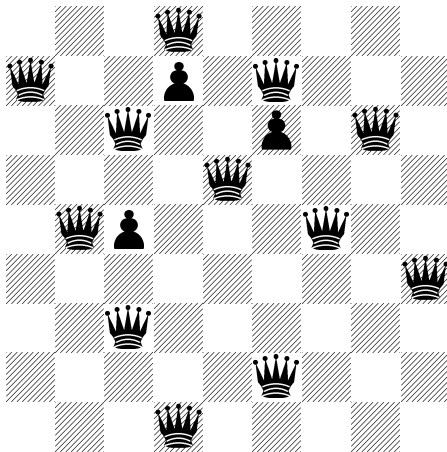
Q: [0, 1], [1, 6], [2, 4], [2, 8], [3, 2], [3, 6], [4, 0], [4, 4], [5, 2], [6, 7], [7, 5], [8, 3]



Solution 2

P: [1, 3], [2, 5], [4, 2]

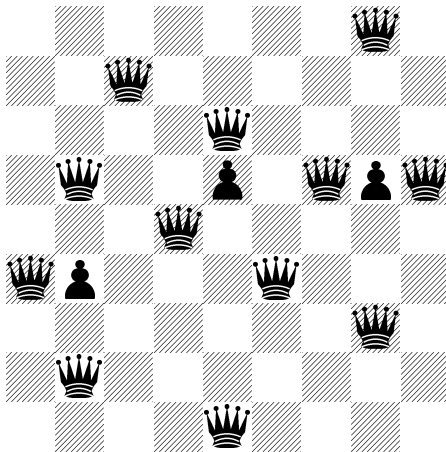
Q: [0, 3], [1, 0], [1, 5], [2, 2], [2, 7], [3, 4], [4, 1], [4, 6], [5, 8], [6, 2], [7, 5], [8, 3]



Solution 3

P: [3, 4], [3, 7], [5, 1]

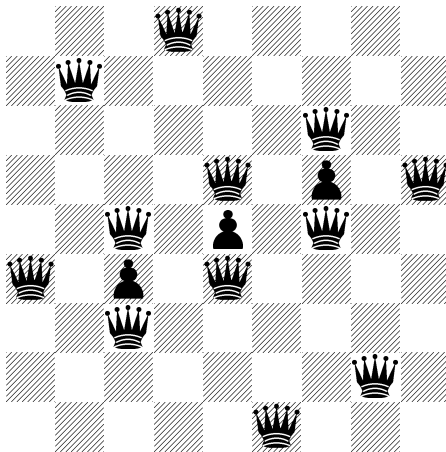
Q: [0, 7], [1, 2], [2, 4], [3, 1], [3, 6], [3, 8], [4, 3], [5, 0], [5, 5], [6, 7], [7, 1], [8, 4]



Solution 4

P: [3, 6], [4, 4], [5, 2]

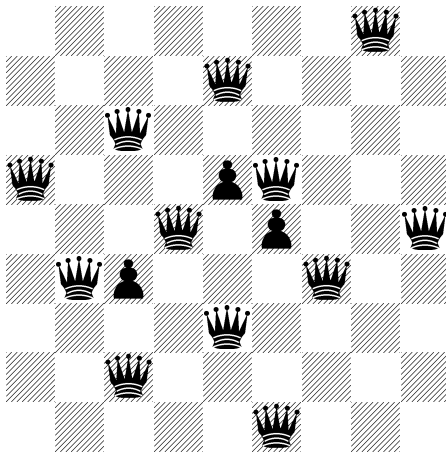
Q: [0, 3], [1, 1], [2, 6], [3, 4], [3, 8], [4, 2], [4, 6], [5, 0], [5, 4], [6, 2], [7, 7], [8, 5]



Solution 5

P: [3, 4], [4, 5], [5, 2]

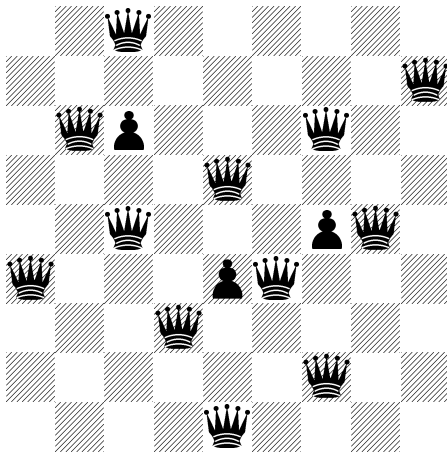
Q: [0, 7], [1, 4], [2, 2], [3, 0], [3, 5], [4, 3], [4, 8], [5, 1], [5, 6], [6, 4], [7, 2], [8, 5]



Solution 6

P: [2, 2], [4, 6], [5, 4]

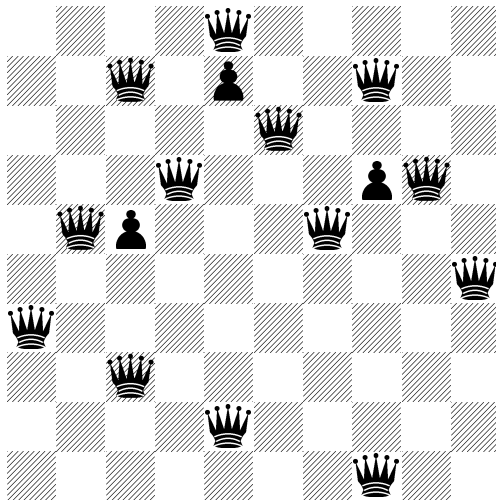
Q: [0, 2], [1, 8], [2, 1], [2, 6], [3, 4], [4, 2], [4, 7], [5, 0], [5, 5], [6, 3], [7, 6], [8, 4]



Solution 1

P: [1, 4], [3, 7], [4, 2]

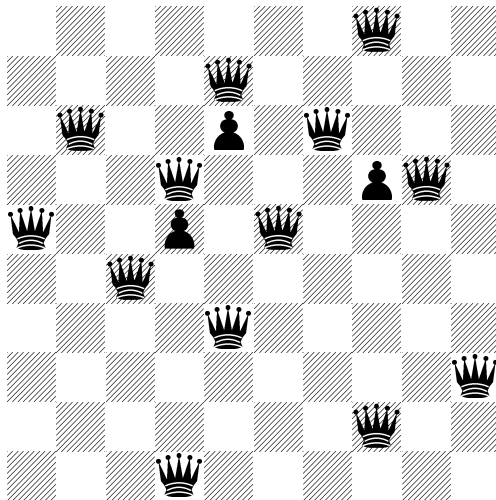
Q: [0, 4], [1, 2], [1, 7], [2, 5], [3, 3], [3, 8], [4, 1], [4, 6], [5, 9], [6, 0], [7, 2], [8, 4], [9, 7]



Solution 2

P: [2, 4], [3, 7], [4, 3]

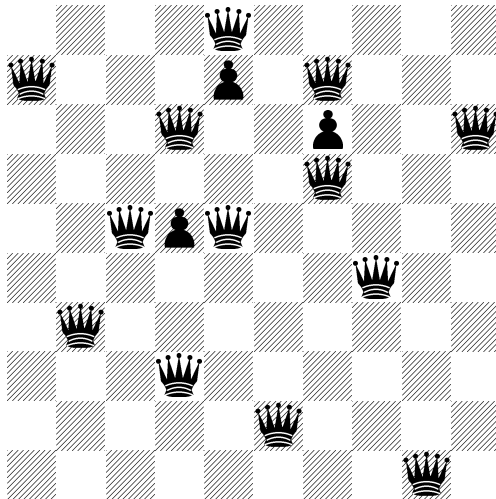
Q: [0, 7], [1, 4], [2, 1], [2, 6], [3, 3], [3, 8], [4, 0], [4, 5], [5, 2], [6, 4], [7, 9], [8, 7], [9, 3]



Solution 3

P: [1, 4], [2, 6], [4, 3]

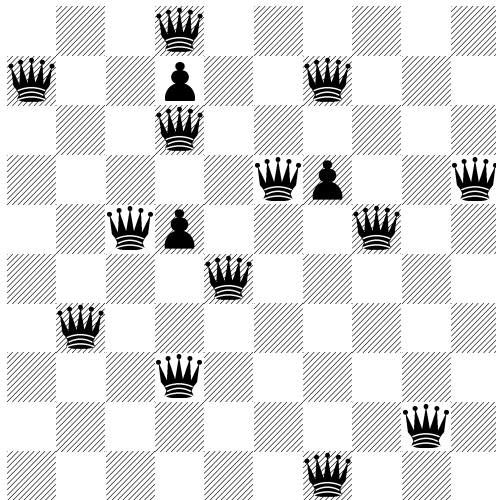
Q: [0, 4], [1, 0], [1, 6], [2, 3], [2, 9], [3, 6], [4, 2], [4, 4], [5, 7], [6, 1], [7, 3], [8, 5], [9, 8]



Solution 4

P: [1, 3], [3, 6], [4, 3]

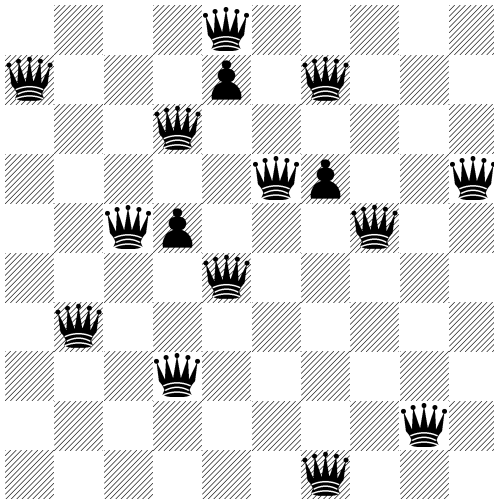
Q: [0, 3], [1, 0], [1, 6], [2, 3], [3, 5], [3, 9], [4, 2], [4, 7], [5, 4], [6, 1], [7, 3], [8, 8], [9, 6]



Solution 5

P: [1, 4], [3, 6], [4, 3]

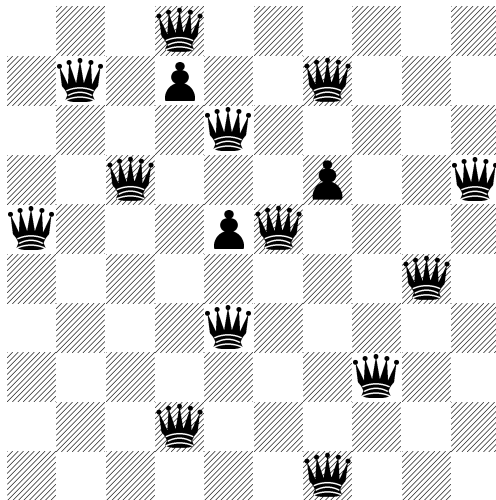
Q: [0, 4], [1, 0], [1, 6], [2, 3], [3, 5], [3, 9], [4, 2], [4, 7], [5, 4], [6, 1], [7, 3], [8, 8], [9, 6]



Solution 6

P: [1, 3], [3, 6], [4, 4]

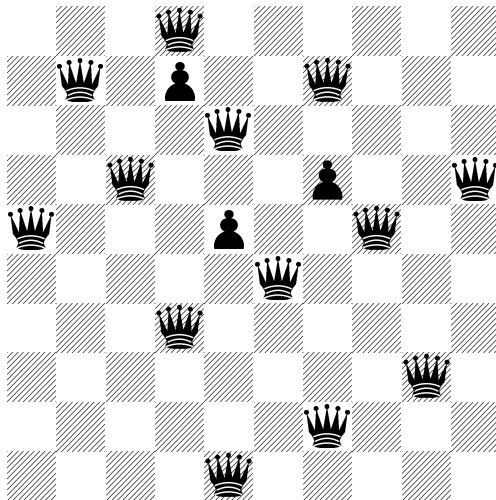
Q: [0, 3], [1, 1], [1, 6], [2, 4], [3, 2], [3, 9], [4, 0], [4, 5], [5, 8], [6, 4], [7, 7], [8, 3], [9, 6]



Solution 7

P: [1, 3], [3, 6], [4, 4]

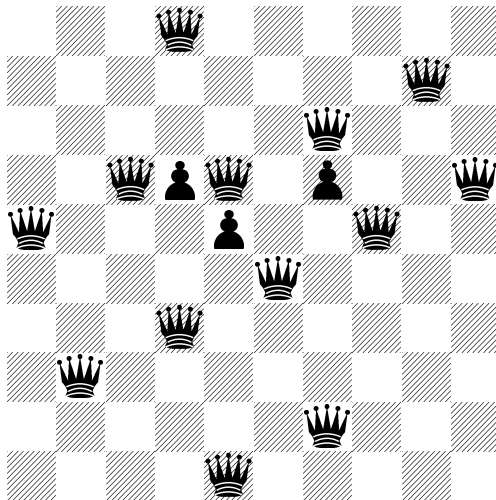
Q: [0, 3], [1, 1], [1, 6], [2, 4], [3, 2], [3, 9], [4, 0], [4, 7], [5, 5], [6, 3], [7, 8], [8, 6], [9, 4]



Solution 8

P: [3, 3], [3, 6], [4, 4]

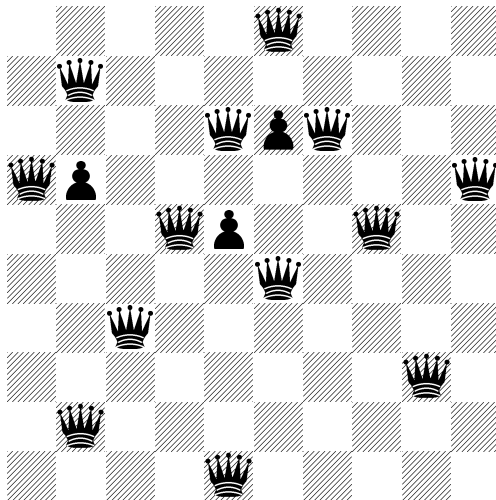
Q: [0, 3], [1, 8], [2, 6], [3, 2], [3, 4], [3, 9], [4, 0], [4, 7], [5, 5], [6, 3], [7, 1], [8, 6], [9, 4]



Solution 9

P: [2, 5], [3, 1], [4, 4]

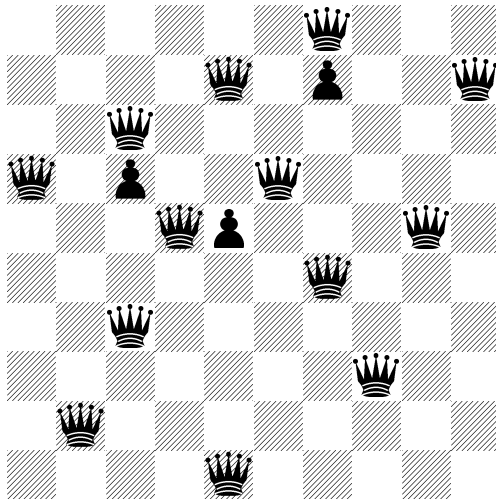
Q: [0, 5], [1, 1], [2, 4], [2, 6], [3, 0], [3, 9], [4, 3], [4, 7], [5, 5], [6, 2], [7, 8], [8, 1], [9, 4]



Solution 10

P: [1, 6], [3, 2], [4, 4]

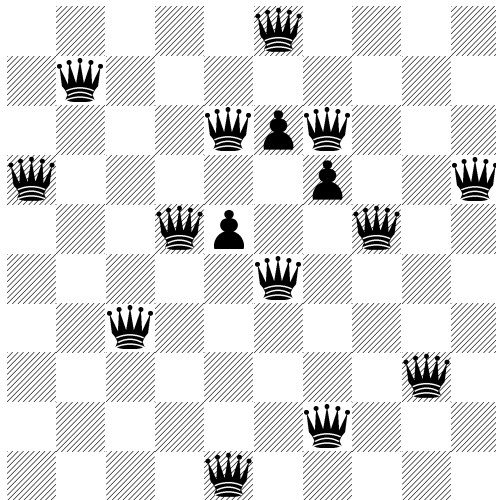
Q: [0, 6], [1, 4], [1, 9], [2, 2], [3, 0], [3, 5], [4, 3], [4, 8], [5, 6], [6, 2], [7, 7], [8, 1], [9, 4]



Solution 11

P: [2, 5], [3, 6], [4, 4]

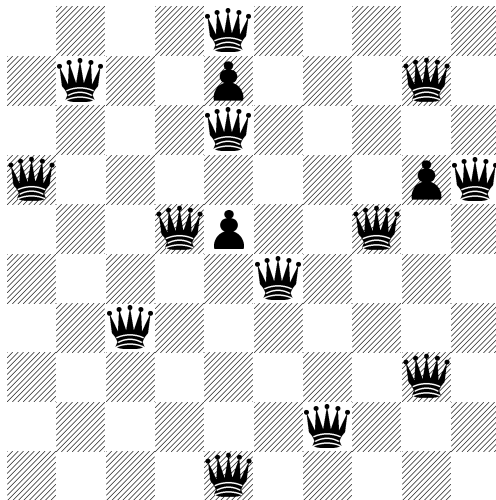
Q: [0, 5], [1, 1], [2, 4], [2, 6], [3, 0], [3, 9], [4, 3], [4, 7], [5, 5], [6, 2], [7, 8], [8, 6], [9, 4]



Solution 12

P: [1, 4], [3, 8], [4, 4]

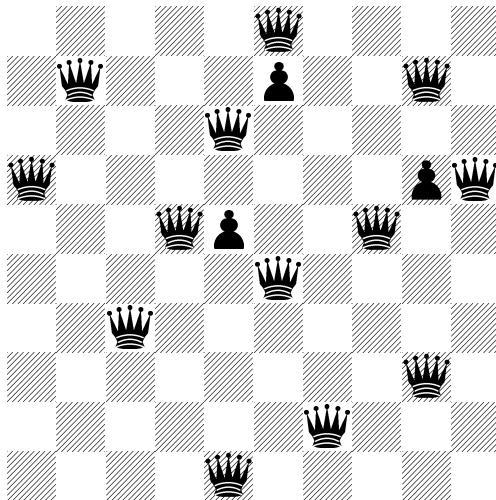
Q: [0, 4], [1, 1], [1, 8], [2, 4], [3, 0], [3, 9], [4, 3], [4, 7], [5, 5], [6, 2], [7, 8], [8, 6], [9, 4]



Solution 13

P: [1, 5], [3, 8], [4, 4]

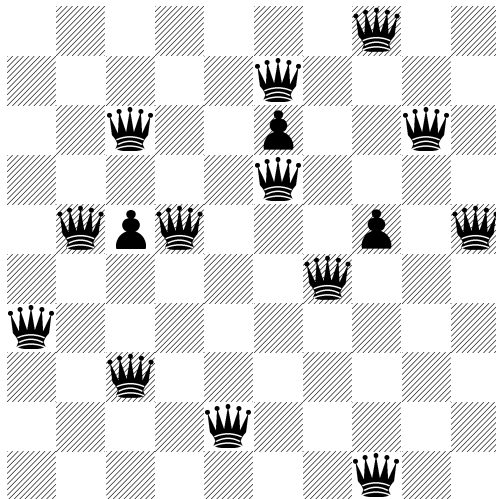
Q: [0, 5], [1, 1], [1, 8], [2, 4], [3, 0], [3, 9], [4, 3], [4, 7], [5, 5], [6, 2], [7, 8], [8, 6], [9, 4]



Solution 14

P: [2, 5], [4, 2], [4, 7]

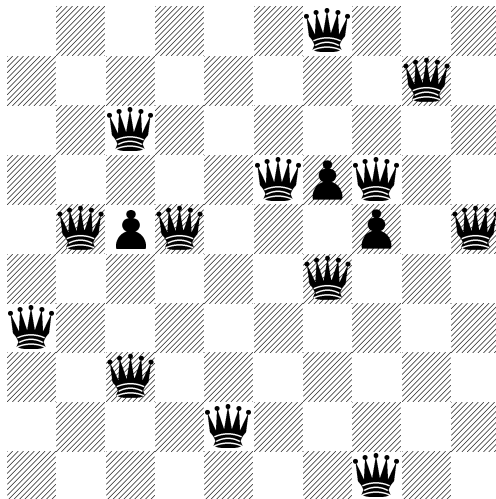
Q: [0, 7], [1, 5], [2, 2], [2, 8], [3, 5], [4, 1], [4, 3], [4, 9], [5, 6], [6, 0], [7, 2], [8, 4], [9, 7]



Solution 15

P: [3, 6], [4, 2], [4, 7]

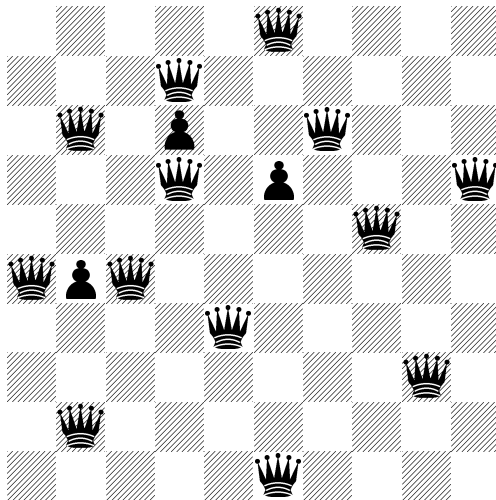
Q: [0, 6], [1, 8], [2, 2], [3, 5], [3, 7], [4, 1], [4, 3], [4, 9], [5, 6], [6, 0], [7, 2], [8, 4], [9, 7]



Solution 16

P: [2, 3], [3, 5], [5, 1]

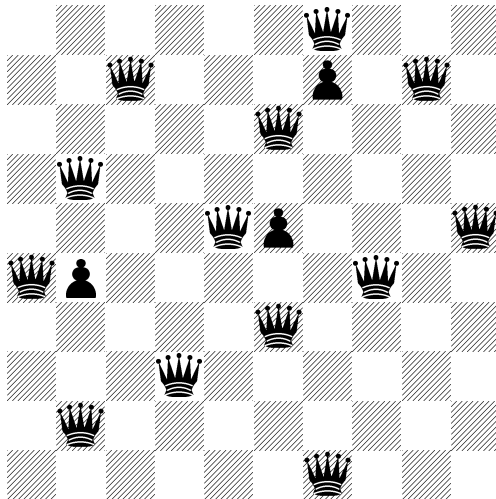
Q: [0, 5], [1, 3], [2, 1], [2, 6], [3, 3], [3, 9], [4, 7], [5, 0], [5, 2], [6, 4], [7, 8], [8, 1], [9, 5]



Solution 17

P: [1, 6], [4, 5], [5, 1]

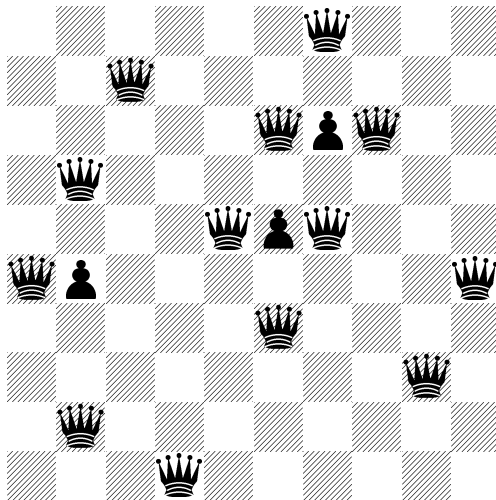
Q: [0, 6], [1, 2], [1, 8], [2, 5], [3, 1], [4, 4], [4, 9], [5, 0], [5, 7], [6, 5], [7, 3], [8, 1], [9, 6]



Solution 18

P: [2, 6], [4, 5], [5, 1]

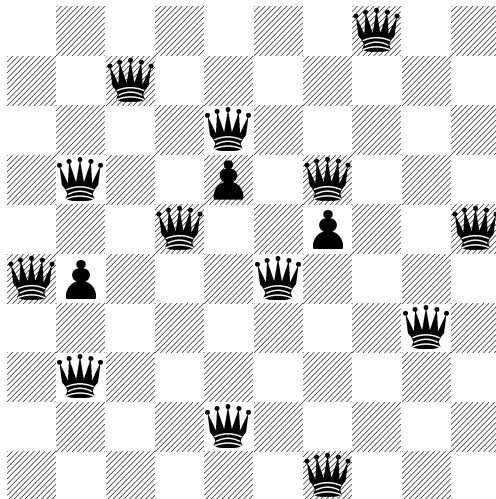
Q: [0, 6], [1, 2], [2, 5], [2, 7], [3, 1], [4, 4], [4, 6], [5, 0], [5, 9], [6, 5], [7, 8], [8, 1], [9, 3]



Solution 19

P: [3, 4], [4, 6], [5, 1]

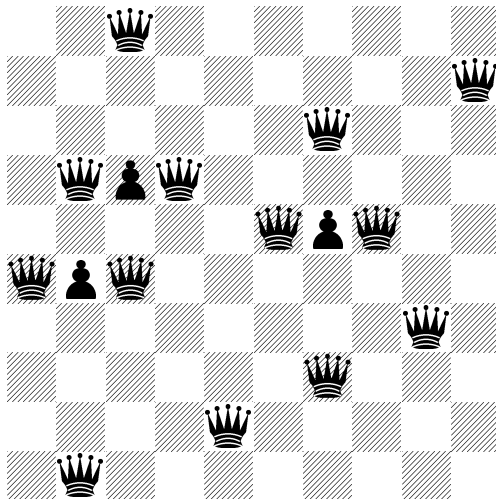
Q: [0, 7], [1, 2], [2, 4], [3, 1], [3, 6], [4, 3], [4, 9], [5, 0], [5, 5], [6, 8], [7, 1], [8, 4], [9, 6]



Solution 20

P: [3, 2], [4, 6], [5, 1]

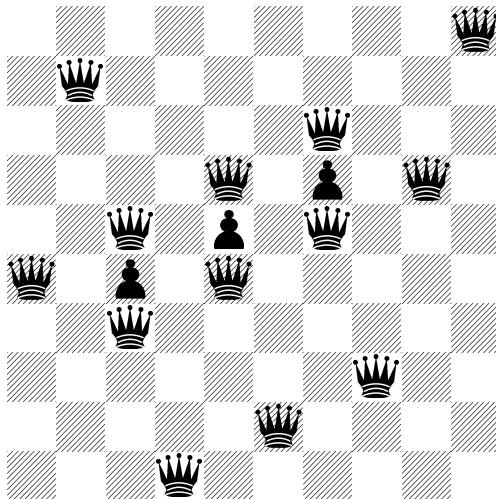
Q: [0, 2], [1, 9], [2, 6], [3, 1], [3, 3], [4, 5], [4, 7], [5, 0], [5, 2], [6, 8], [7, 6], [8, 4], [9, 1]



Solution 21

P: [3, 6], [4, 4], [5, 2]

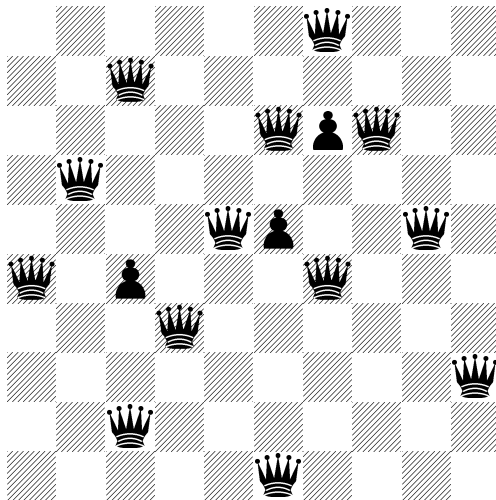
Q: [0, 9], [1, 1], [2, 6], [3, 4], [3, 8], [4, 2], [4, 6], [5, 0], [5, 4], [6, 2], [7, 7], [8, 5], [9, 3]



Solution 22

P: [2, 6], [4, 5], [5, 2]

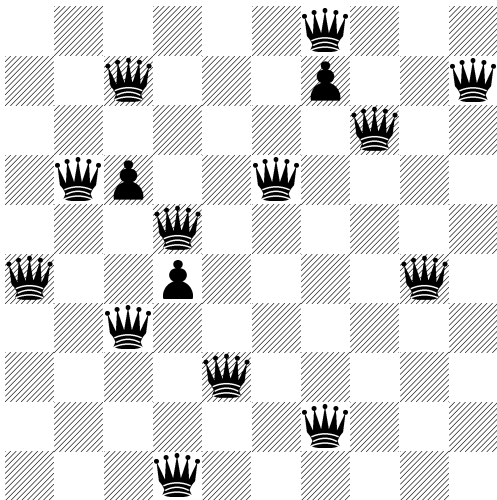
Q: [0, 6], [1, 2], [2, 5], [2, 7], [3, 1], [4, 4], [4, 8], [5, 0], [5, 6], [6, 3], [7, 9], [8, 2], [9, 5]



Solution 23

P: [1, 6], [3, 2], [5, 3]

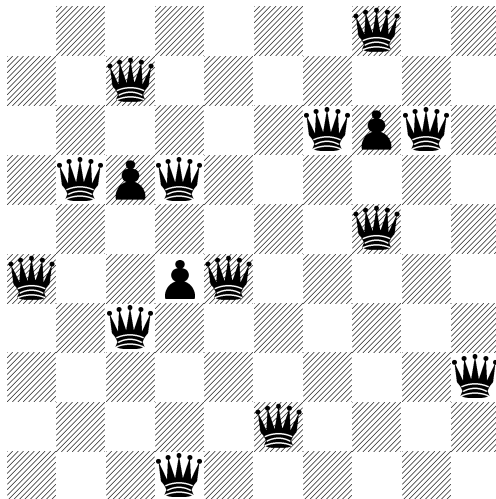
Q: [0, 6], [1, 2], [1, 9], [2, 7], [3, 1], [3, 5], [4, 3], [5, 0], [5, 8], [6, 2], [7, 4], [8, 6], [9, 3]



Solution 24

P: [2, 7], [3, 2], [5, 3]

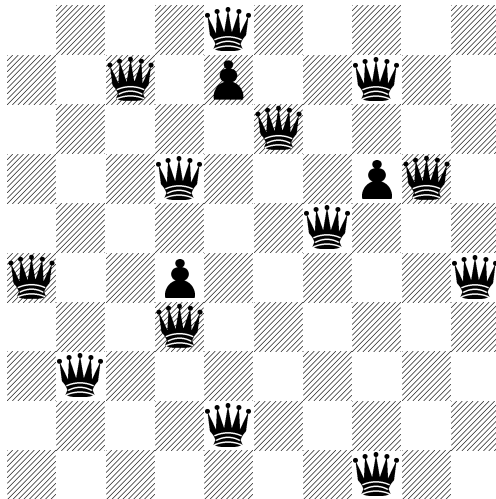
Q: [0, 7], [1, 2], [2, 6], [2, 8], [3, 1], [3, 3], [4, 7], [5, 0], [5, 4], [6, 2], [7, 9], [8, 5], [9, 3]



Solution 25

P: [1, 4], [3, 7], [5, 3]

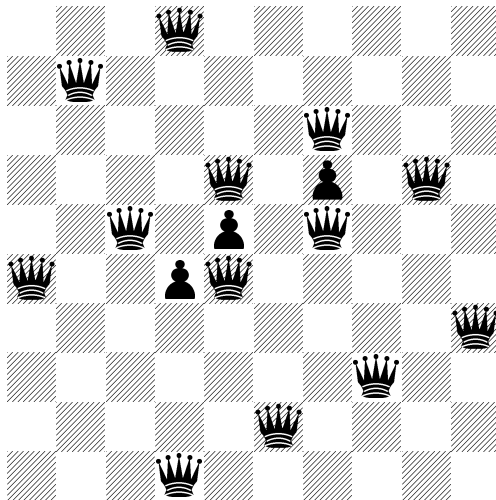
Q: [0, 4], [1, 2], [1, 7], [2, 5], [3, 3], [3, 8], [4, 6], [5, 0], [5, 9], [6, 3], [7, 1], [8, 4], [9, 7]



Solution 26

P: [3, 6], [4, 4], [5, 3]

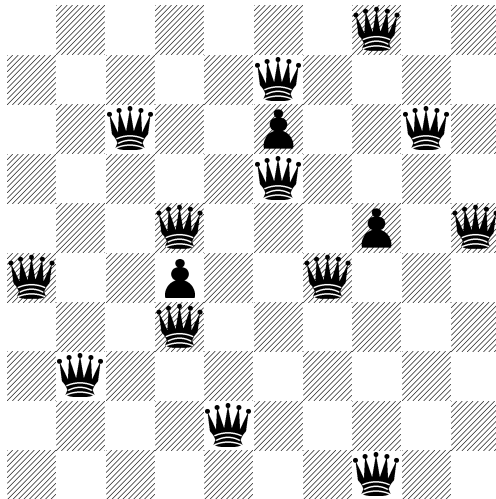
Q: [0, 3], [1, 1], [2, 6], [3, 4], [3, 8], [4, 2], [4, 6], [5, 0], [5, 4], [6, 9], [7, 7], [8, 5], [9, 3]



Solution 27

P: [2, 5], [4, 7], [5, 3]

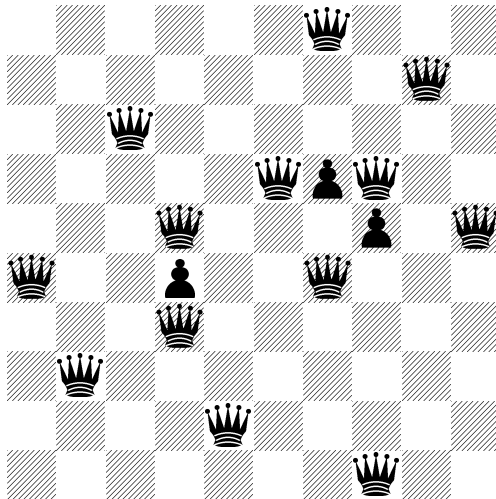
Q: [0, 7], [1, 5], [2, 2], [2, 8], [3, 5], [4, 3], [4, 9], [5, 0], [5, 6], [6, 3], [7, 1], [8, 4], [9, 7]



Solution 28

P: [3, 6], [4, 7], [5, 3]

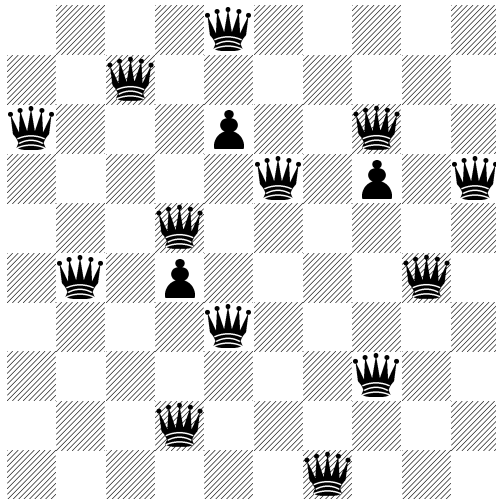
Q: [0, 6], [1, 8], [2, 2], [3, 5], [3, 7], [4, 3], [4, 9], [5, 0], [5, 6], [6, 3], [7, 1], [8, 4], [9, 7]



Solution 29

P: [2, 4], [3, 7], [5, 3]

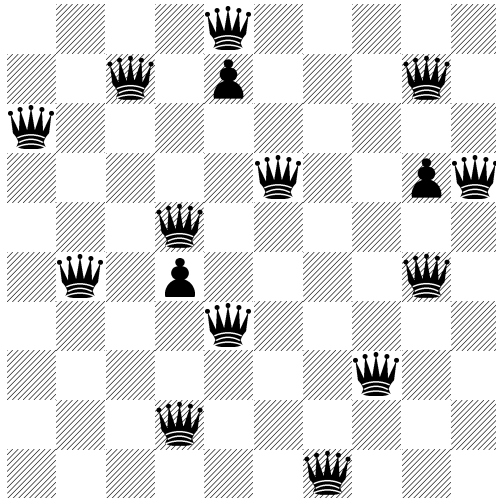
Q: [0, 4], [1, 2], [2, 0], [2, 7], [3, 5], [3, 9], [4, 3], [5, 1], [5, 8], [6, 4], [7, 7], [8, 3], [9, 6]



Solution 30

P: [1, 4], [3, 8], [5, 3]

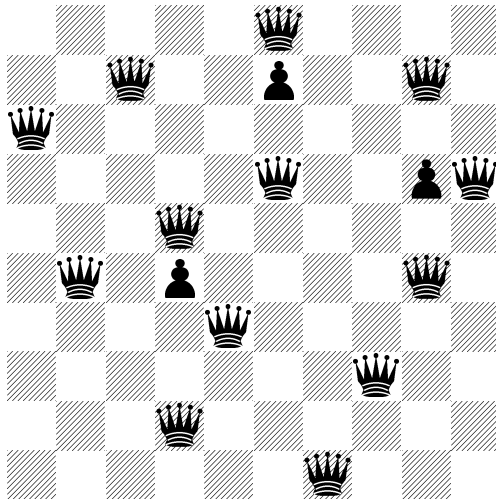
Q: [0, 4], [1, 2], [1, 8], [2, 0], [3, 5], [3, 9], [4, 3], [5, 1], [5, 8], [6, 4], [7, 7], [8, 3], [9, 6]



Solution 31

P: [1, 5], [3, 8], [5, 3]

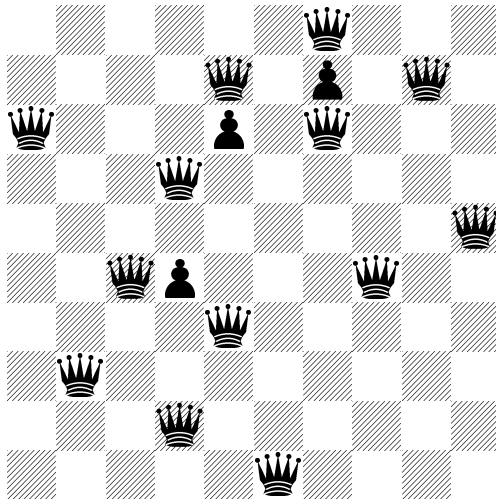
Q: [0, 5], [1, 2], [1, 8], [2, 0], [3, 5], [3, 9], [4, 3], [5, 1], [5, 8], [6, 4], [7, 7], [8, 3], [9, 6]



Solution 32

P: [1, 6], [2, 4], [5, 3]

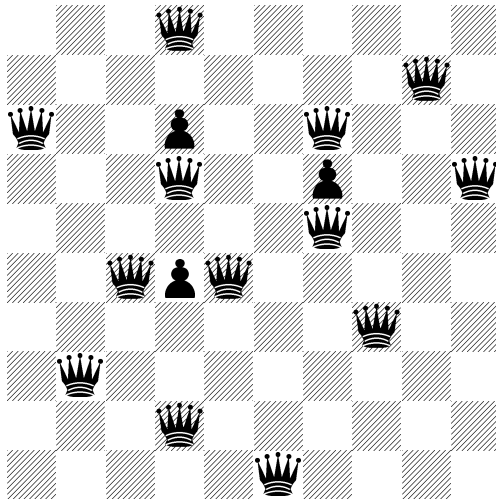
Q: [0, 6], [1, 4], [1, 8], [2, 0], [2, 6], [3, 3], [4, 9], [5, 2], [5, 7], [6, 4], [7, 1], [8, 3], [9, 5]



Solution 33

P: [2, 3], [3, 6], [5, 3]

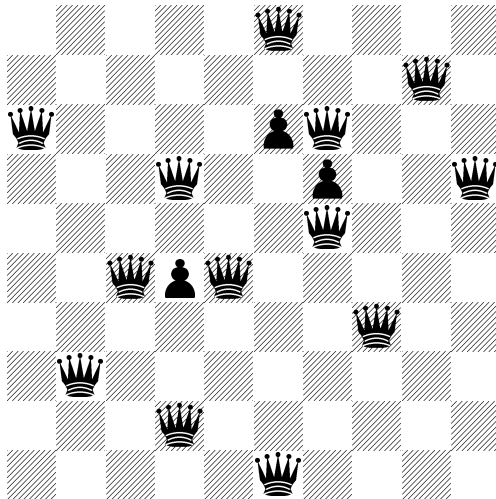
Q: [0, 3], [1, 8], [2, 0], [2, 6], [3, 3], [3, 9], [4, 6], [5, 2], [5, 4], [6, 7], [7, 1], [8, 3], [9, 5]



Solution 34

P: [2, 5], [3, 6], [5, 3]

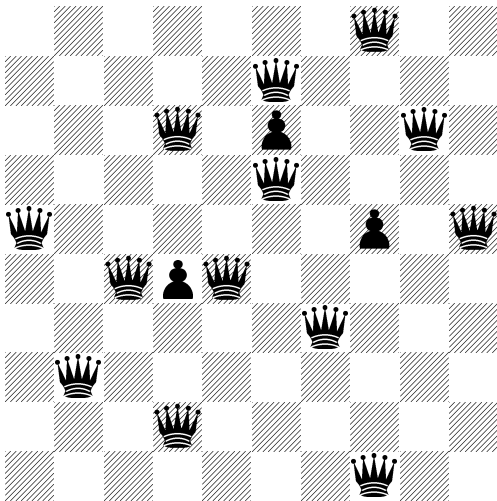
Q: [0, 5], [1, 8], [2, 0], [2, 6], [3, 3], [3, 9], [4, 6], [5, 2], [5, 4], [6, 7], [7, 1], [8, 3], [9, 5]



Solution 35

P: [2, 5], [4, 7], [5, 3]

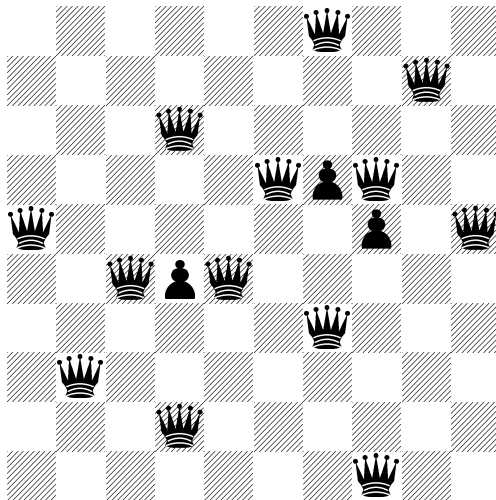
Q: [0, 7], [1, 5], [2, 3], [2, 8], [3, 5], [4, 0], [4, 9], [5, 2], [5, 4], [6, 6], [7, 1], [8, 3], [9, 7]



Solution 36

P: [3, 6], [4, 7], [5, 3]

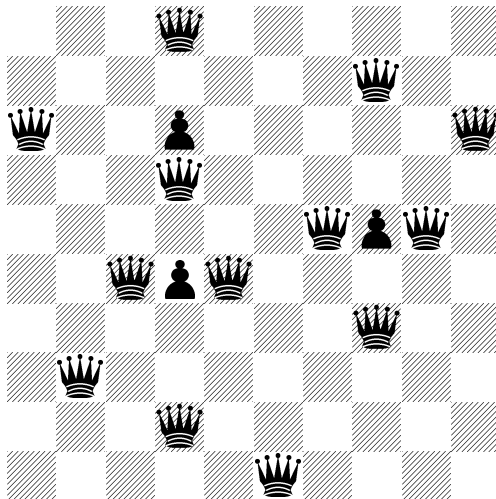
Q: [0, 6], [1, 8], [2, 3], [3, 5], [3, 7], [4, 0], [4, 9], [5, 2], [5, 4], [6, 6], [7, 1], [8, 3], [9, 7]



Solution 37

P: [2, 3], [4, 7], [5, 3]

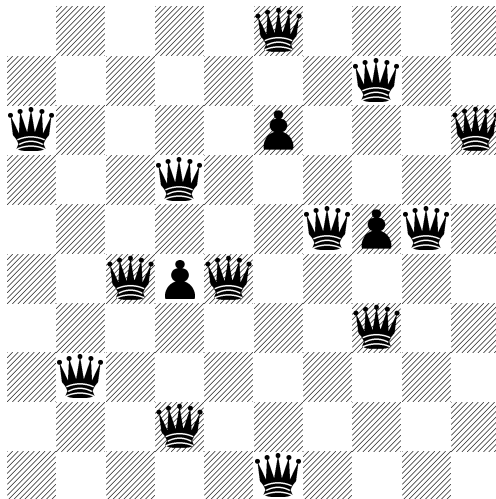
Q: [0, 3], [1, 7], [2, 0], [2, 9], [3, 3], [4, 6], [4, 8], [5, 2], [5, 4], [6, 7], [7, 1], [8, 3], [9, 5]



Solution 38

P: [2, 5], [4, 7], [5, 3]

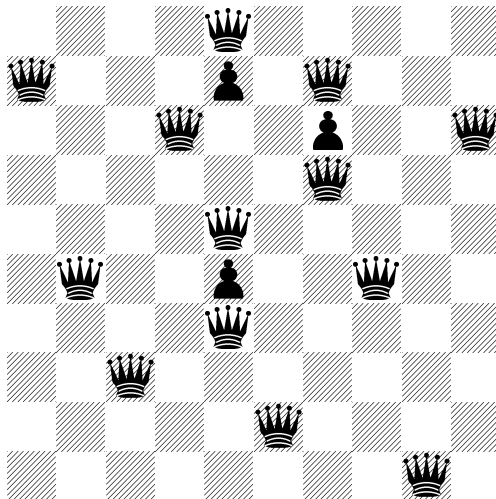
Q: [0, 5], [1, 7], [2, 0], [2, 9], [3, 3], [4, 6], [4, 8], [5, 2], [5, 4], [6, 7], [7, 1], [8, 3], [9, 5]



Solution 39

P: [1, 4], [2, 6], [5, 4]

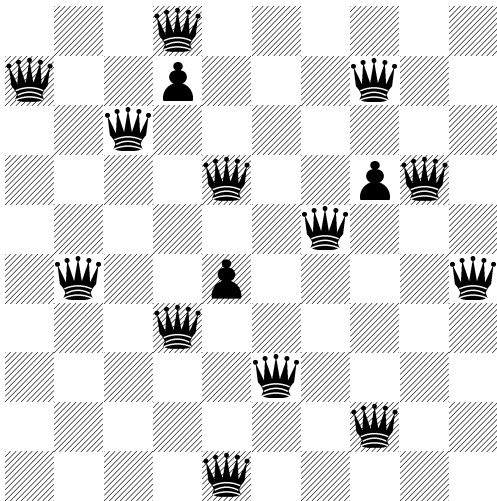
Q: [0, 4], [1, 0], [1, 6], [2, 3], [2, 9], [3, 6], [4, 4], [5, 1], [5, 7], [6, 4], [7, 2], [8, 5], [9, 8]



Solution 40

P: [1, 3], [3, 7], [5, 4]

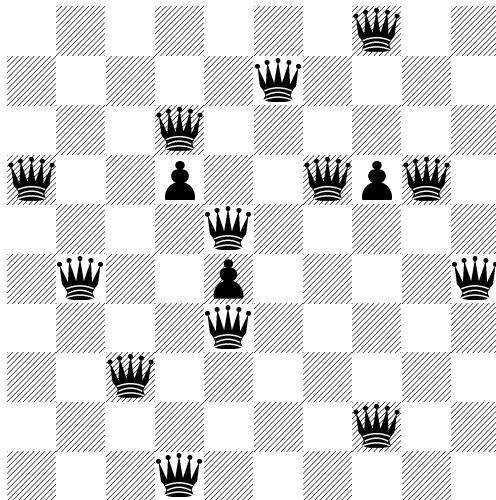
Q: [0, 3], [1, 0], [1, 7], [2, 2], [3, 4], [3, 8], [4, 6], [5, 1], [5, 9], [6, 3], [7, 5], [8, 7], [9, 4]



Solution 41

P: [3, 3], [3, 7], [5, 4]

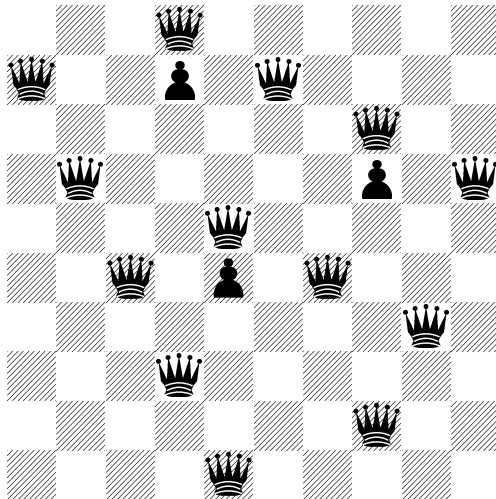
Q: [0, 7], [1, 5], [2, 3], [3, 0], [3, 6], [3, 8], [4, 4], [5, 1], [5, 9], [6, 4], [7, 2], [8, 7], [9, 3]



Solution 42

P: [1, 3], [3, 7], [5, 4]

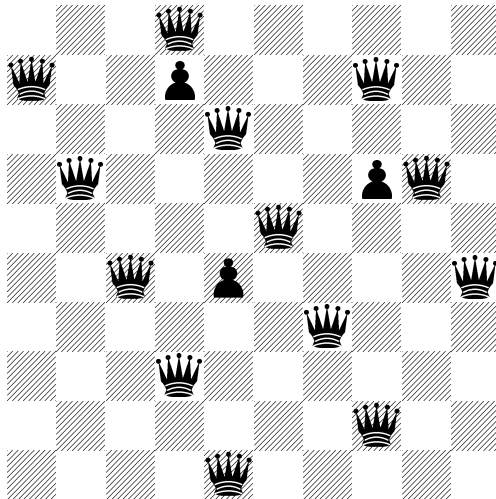
Q: [0, 3], [1, 0], [1, 5], [2, 7], [3, 1], [3, 9], [4, 4], [5, 2], [5, 6], [6, 8], [7, 3], [8, 7], [9, 4]



Solution 43

P: [1, 3], [3, 7], [5, 4]

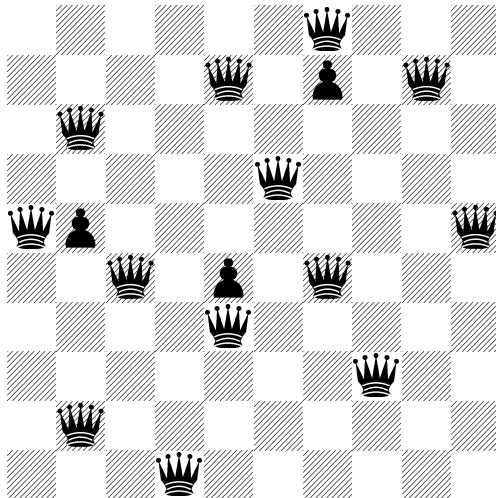
Q: [0, 3], [1, 0], [1, 7], [2, 4], [3, 1], [3, 8], [4, 5], [5, 2], [5, 9], [6, 6], [7, 3], [8, 7], [9, 4]



Solution 44

P: [1, 6], [4, 1], [5, 4]

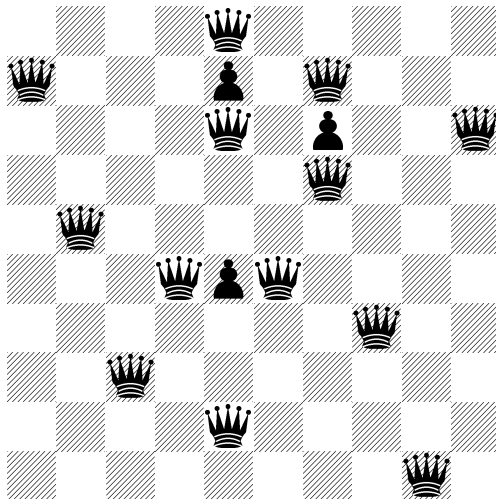
Q: [0, 6], [1, 4], [1, 8], [2, 1], [3, 5], [4, 0], [4, 9], [5, 2], [5, 6], [6, 4], [7, 7], [8, 1], [9, 3]



Solution 45

P: [1, 4], [2, 6], [5, 4]

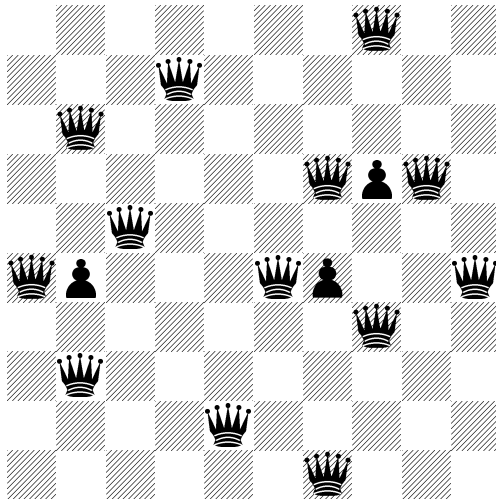
Q: [0, 4], [1, 0], [1, 6], [2, 4], [2, 9], [3, 6], [4, 1], [5, 3], [5, 5], [6, 7], [7, 2], [8, 4], [9, 8]



Solution 46

P: [3, 7], [5, 1], [5, 6]

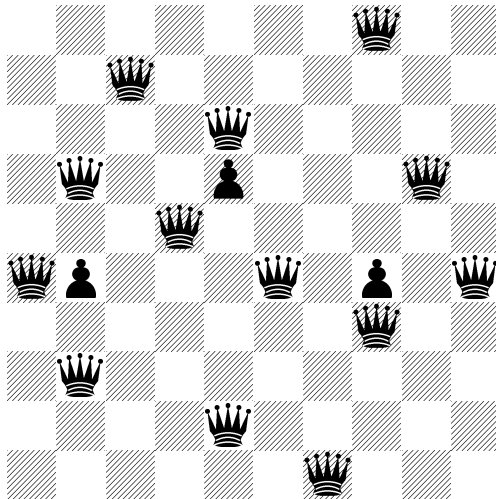
Q: [0, 7], [1, 3], [2, 1], [3, 6], [3, 8], [4, 2], [5, 0], [5, 5], [5, 9], [6, 7], [7, 1], [8, 4], [9, 6]



Solution 47

P: [3, 4], [5, 1], [5, 7]

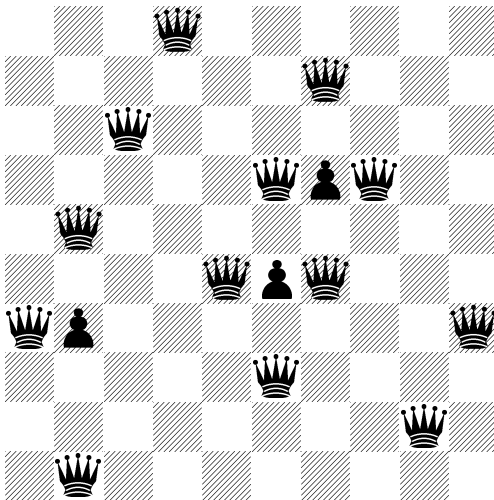
Q: [0, 7], [1, 2], [2, 4], [3, 1], [3, 8], [4, 3], [5, 0], [5, 5], [5, 9], [6, 7], [7, 1], [8, 4], [9, 6]



Solution 48

P: [3, 6], [5, 5], [6, 1]

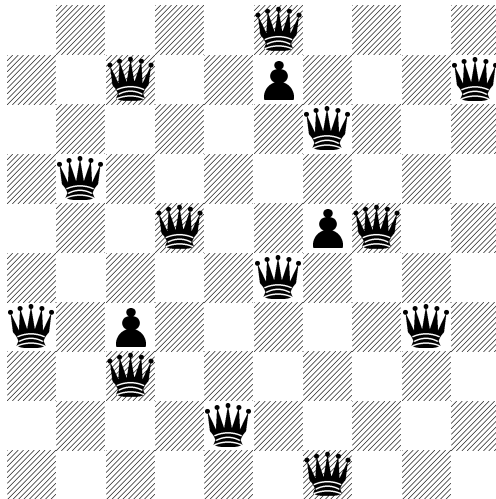
Q: [0, 3], [1, 6], [2, 2], [3, 5], [3, 7], [4, 1], [5, 4], [5, 6], [6, 0], [6, 9], [7, 5], [8, 8], [9, 1]



Solution 49

P: [1, 5], [4, 6], [6, 2]

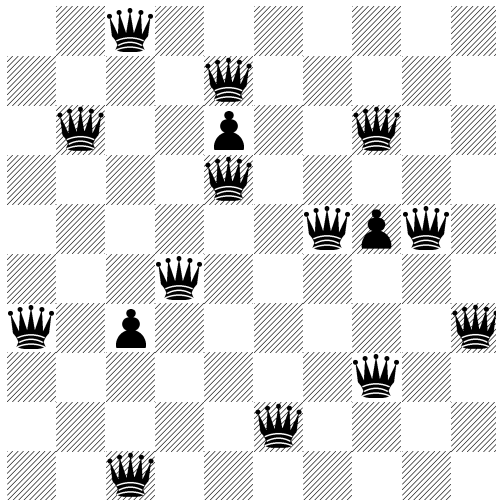
Q: [0, 5], [1, 2], [1, 9], [2, 6], [3, 1], [4, 3], [4, 7], [5, 5], [6, 0], [6, 8], [7, 2], [8, 4], [9, 6]



Solution 50

P: [2, 4], [4, 7], [6, 2]

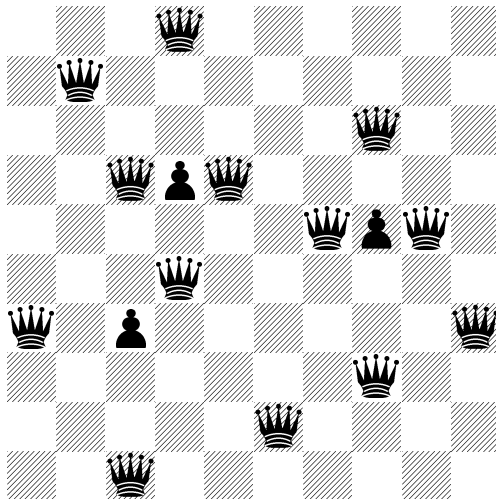
Q: [0, 2], [1, 4], [2, 1], [2, 7], [3, 4], [4, 6], [4, 8], [5, 3], [6, 0], [6, 9], [7, 7], [8, 5], [9, 2]



Solution 51

P: [3, 3], [4, 7], [6, 2]

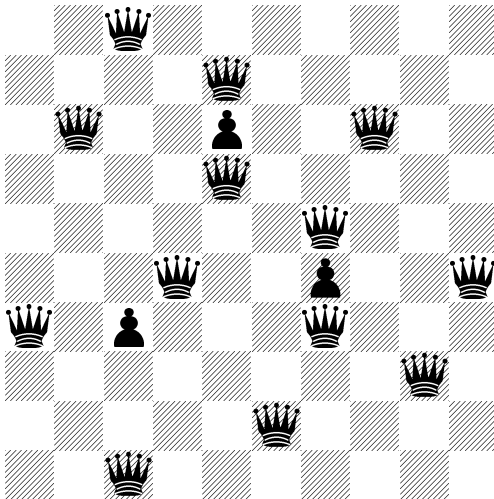
Q: [0, 3], [1, 1], [2, 7], [3, 2], [3, 4], [4, 6], [4, 8], [5, 3], [6, 0], [6, 9], [7, 7], [8, 5], [9, 2]



Solution 52

P: [2, 4], [5, 6], [6, 2]

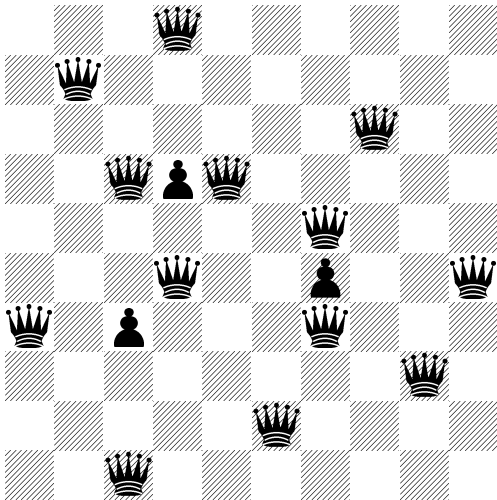
Q: [0, 2], [1, 4], [2, 1], [2, 7], [3, 4], [4, 6], [5, 3], [5, 9], [6, 0], [6, 6], [7, 8], [8, 5], [9, 2]



Solution 53

P: [3, 3], [5, 6], [6, 2]

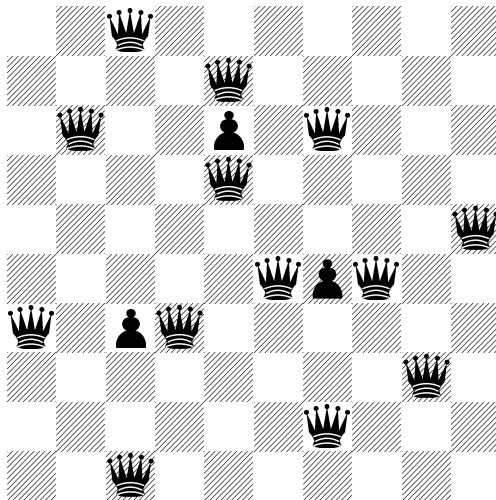
Q: [0, 3], [1, 1], [2, 7], [3, 2], [3, 4], [4, 6], [5, 3], [5, 9], [6, 0], [6, 6], [7, 8], [8, 5], [9, 2]



Solution 54

P: [2, 4], [5, 6], [6, 2]

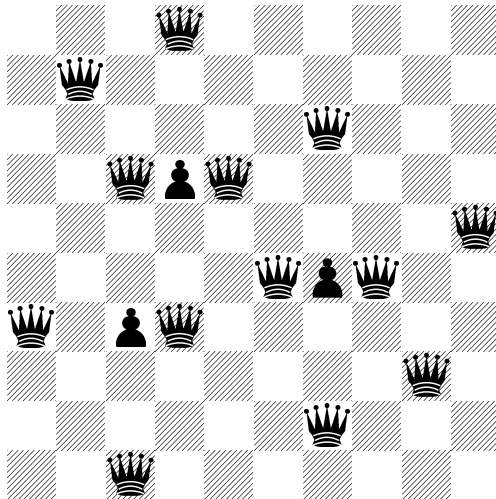
Q: [0, 2], [1, 4], [2, 1], [2, 6], [3, 4], [4, 9], [5, 5], [5, 7], [6, 0], [6, 3], [7, 8], [8, 6], [9, 2]



Solution 55

P: [3, 3], [5, 6], [6, 2]

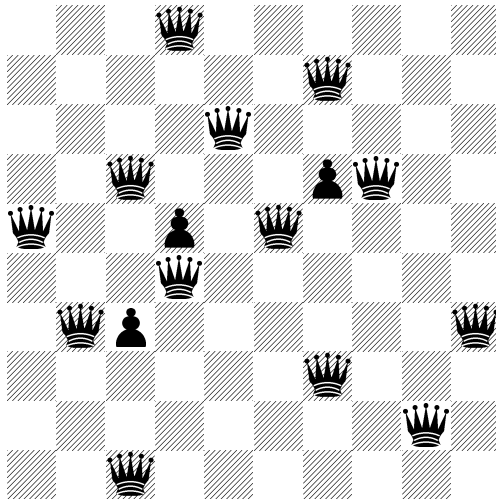
Q: [0, 3], [1, 1], [2, 6], [3, 2], [3, 4], [4, 9], [5, 5], [5, 7], [6, 0], [6, 3], [7, 8], [8, 6], [9, 2]



Solution 56

P: [3, 6], [4, 3], [6, 2]

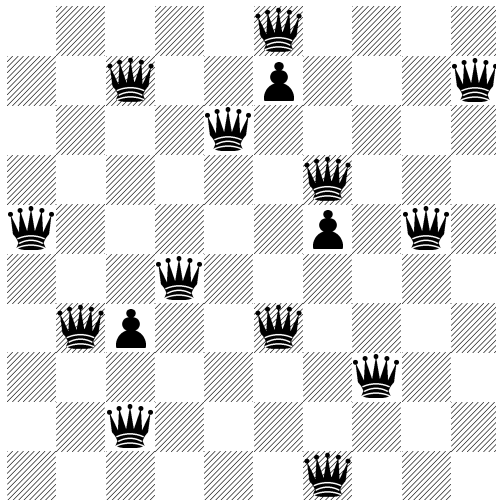
Q: [0, 3], [1, 6], [2, 4], [3, 2], [3, 7], [4, 0], [4, 5], [5, 3], [6, 1], [6, 9], [7, 6], [8, 8], [9, 2]



Solution 57

P: [1, 5], [4, 6], [6, 2]

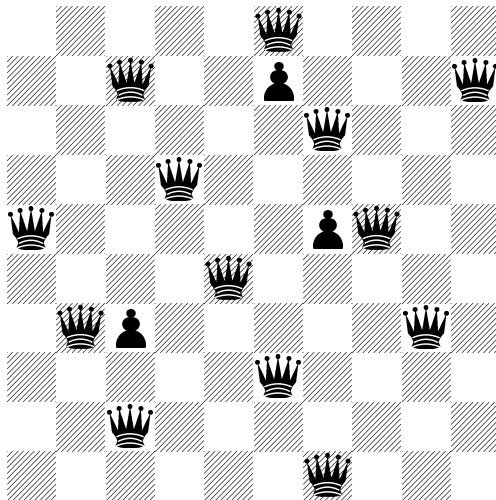
Q: [0, 5], [1, 2], [1, 9], [2, 4], [3, 6], [4, 0], [4, 8], [5, 3], [6, 1], [6, 5], [7, 7], [8, 2], [9, 6]



Solution 58

P: [1, 5], [4, 6], [6, 2]

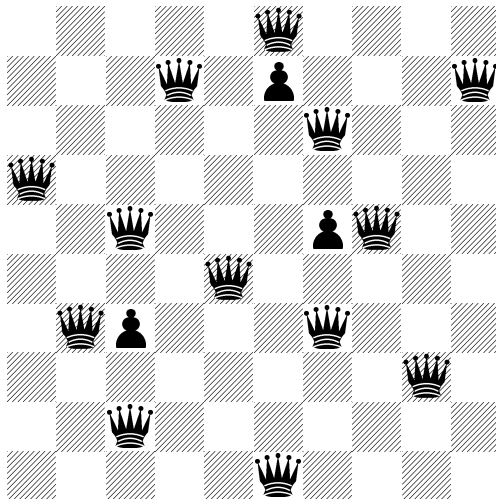
Q: [0, 5], [1, 2], [1, 9], [2, 6], [3, 3], [4, 0], [4, 7], [5, 4], [6, 1], [6, 8], [7, 5], [8, 2], [9, 6]



Solution 59

P: [1, 5], [4, 6], [6, 2]

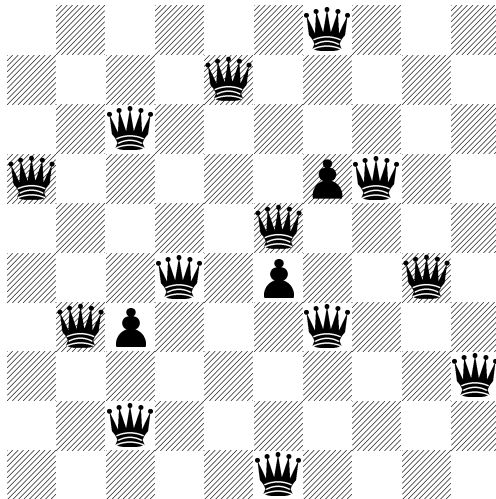
Q: [0, 5], [1, 3], [1, 9], [2, 6], [3, 0], [4, 2], [4, 7], [5, 4], [6, 1], [6, 6], [7, 8], [8, 2], [9, 5]



Solution 60

P: [3, 6], [5, 5], [6, 2]

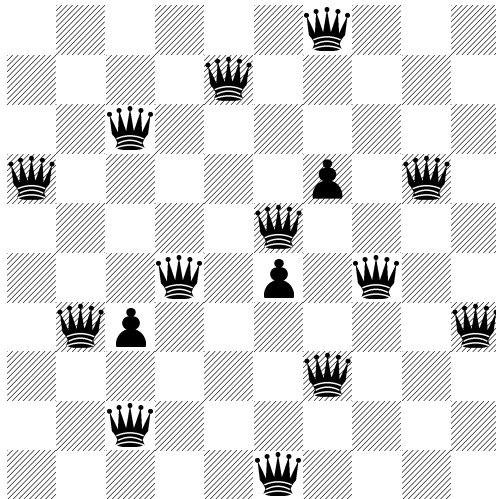
Q: [0, 6], [1, 4], [2, 2], [3, 0], [3, 7], [4, 5], [5, 3], [5, 8], [6, 1], [6, 6], [7, 9], [8, 2], [9, 5]



Solution 61

P: [3, 6], [5, 5], [6, 2]

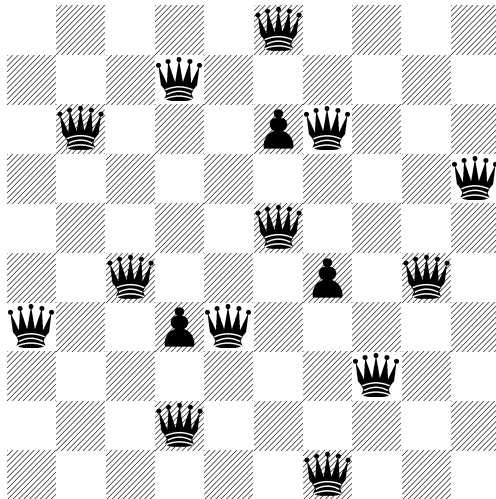
Q: [0, 6], [1, 4], [2, 2], [3, 0], [3, 8], [4, 5], [5, 3], [5, 7], [6, 1], [6, 9], [7, 6], [8, 2], [9, 5]



Solution 62

P: [2, 5], [5, 6], [6, 3]

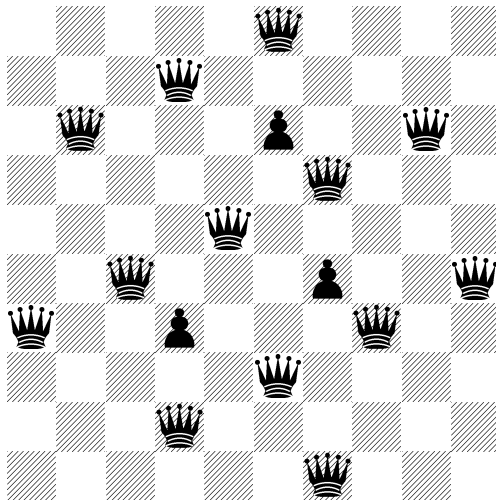
Q: [0, 5], [1, 3], [2, 1], [2, 6], [3, 9], [4, 5], [5, 2], [5, 8], [6, 0], [6, 4], [7, 7], [8, 3], [9, 6]



Solution 63

P: [2, 5], [5, 6], [6, 3]

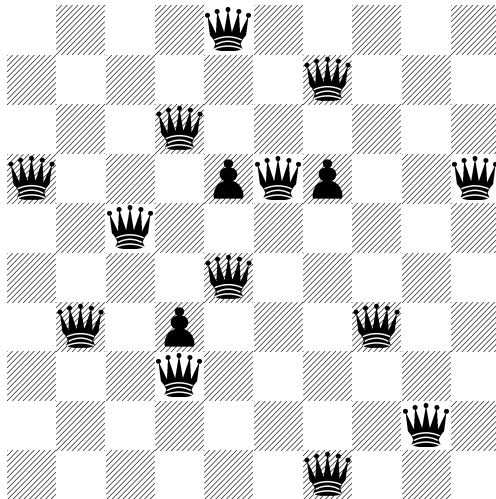
Q: [0, 5], [1, 3], [2, 1], [2, 8], [3, 6], [4, 4], [5, 2], [5, 9], [6, 0], [6, 7], [7, 5], [8, 3], [9, 6]



Solution 64

P: [3, 4], [3, 6], [6, 3]

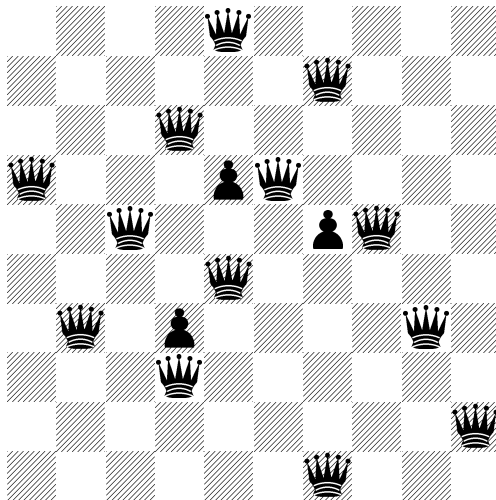
Q: [0, 4], [1, 6], [2, 3], [3, 0], [3, 5], [3, 9], [4, 2], [5, 4], [6, 1], [6, 7], [7, 3], [8, 8], [9, 6]



Solution 65

P: [3, 4], [4, 6], [6, 3]

Q: [0, 4], [1, 6], [2, 3], [3, 0], [3, 5], [4, 2], [4, 7], [5, 4], [6, 1], [6, 8], [7, 3], [8, 9], [9, 6]



Solution 66

P: [2, 5], [4, 6], [6, 3]

Q: [0, 2], [1, 5], [2, 3], [2, 8], [3, 6], [4, 4], [4, 9], [5, 7], [6, 1], [6, 5], [7, 3], [8, 6], [9, 0]

