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1. O(n)
2. def factorial(n):

    if n == 0:

        return n

    return n \* factorial(n - 1)

1. O(n^2)
2. f(x) = 3x^2 + 5x – 7
   1. f’(x) = 6x+5
   2. f’(5) = 35
   3. f’’(x) = 6
   4. f’’(5) = 6
3. 1 egg per day / 2 hens = 0.5 eggs per hen per day \* 10 days = 5 eggs \* 10 hens = 50 eggs
4. file\_stats.py
5. nth\_smallest.py
6. C
7. C