Problem 3

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10/10 points (graded)

For each of the following expressions, select the order of growth class that best describes it from the following list: $O(1), O(\log(n)), O(n), O(n\log(n)), O(n^c)$ or $O(c^n)$. Assume c is some constant.

Clicking Check will grade ALL the sub-problems. You have 2 attempts for this problem.

1. $0.0000001n + 1000000$

   O(n) ✔

2. $0.0001n^2 + 20000n - 90000$

   O(n^c) ✔

3. $20n + 900\log(n) + 100000$

   O(n) ✔

4. $(\log(n))^2 + 5n^7$

   O(n^c) ✔

5. $n^{200} - 2n^{30}$

   O(n^c) ✔

6. $30n^2 + n\log(n)$

   O(n^c) ✔

7. $n\log(n) - 3000n$

   O(n log(n)) ✔

8. 3

O(1) ✔

9. $5^n + n^5 + n + 5$

O(c^n) ✔

10. $n\log(n) + n^2 + n + \log n + 1 + 2^n$

O(c^n) ✔

Submit You have used 2 of 2 attempts

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Topic: Problem Set 6 / Problem 3

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