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CIS 360 – 01

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Lab 1 Answers

**Task A:**

Since the inside *while* loop is n/2 over and over, the complexity comes down to n = 2k. This converts into log2n. Multiplied with the outer *for* loop, which is complexity n, the answer becomes: T(n) = O(nlog2n)

T(10): 40

T(1000): 10000

T(100000): 1700000

**Task B:**

Output: 57

There are two *for* loops that are not nested: T(n) = O(2n)