**Assignment 1**

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Part 1

**Part 2**

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| **Category** | **Function** |  |
| n! | n! |  |
| cn | 4n | 2n |
| clogn | 2log2n |  |
| n71 | n71+5n+17n |  |
| cn4 | ¾n4 |  |
| n3 | n3-logn | n3 |
| n2 | 3n2+7n+15 | n2 |
| √n3 | √n3 |  |
| n | 18n |  |
| clogbn | Log10n | 3log2n |

**Part 3**

T(n) = T(n/2+cs) + T(n/2) + 3n

O(n) = 4n