Assignment#7

Problem 7.2: **memory allocation profiling using library interposition**

a) The amount of bytes **with everything combined** is: 3018796 (including free calls). The amount of bytes **without free calls** is 1770789.
The amount of bytes of **free calls** is 1248010.

b) Function, asize_min, asize_mean, asize_max
Malloc, 1, 387.03464566929136, 65536
Free, 1, 393.8172925213001, 65536
Calloc, 32, 23241.333333333332, 262144
Realloc, 6, 1584.7435897435898, 12441

c) Count | Bytes

4483	32
231	768
194	976
114	40
100	36
82	52
72	44
62	1520
48	48
46	20

d) Yes there were a lot of cases where malloc and calloc returned the same pointer. This is a very common and expected occurrence since when you free() a chunk, the allocator usually keeps that chunk on a free list. A later malloc() or calloc() for the same size will often reuse that freed chunk and return the same pointer.