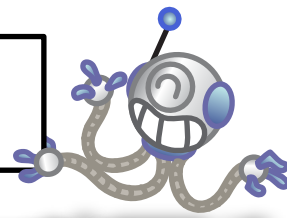
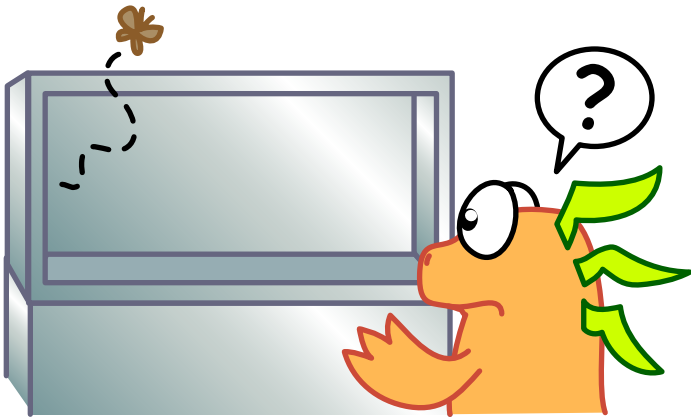


# Cache Misses

When you just can't find what you're looking for...

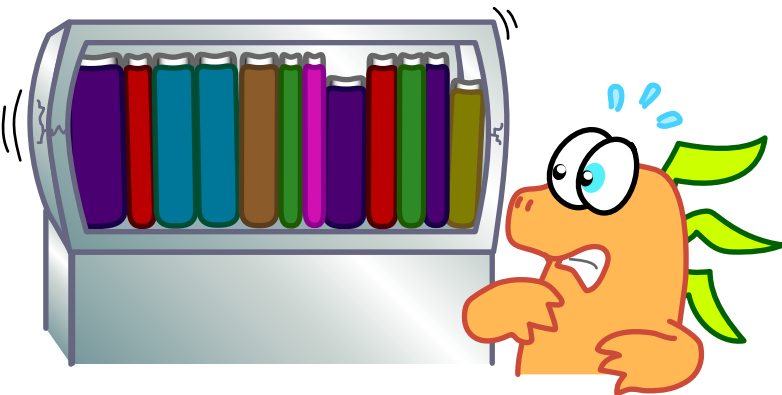


Sometimes, the cache doesn't have the memory block the computer's looking for. When this happens, it's called a cache miss. There are three causes of cache misses. Just remember the three C's:



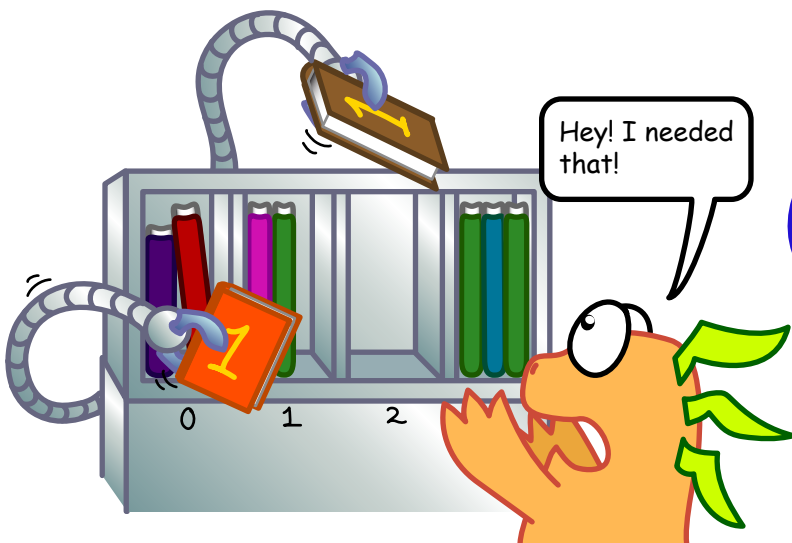
## Compulsory

Compulsory misses happen when a block is referenced for the first time. The computer can't get a block that doesn't exist yet!



## Capacity

The block is not in the cache because there is no space in the cache for it. Caches are of finite size, after all.



## Conflict

These types of misses happen only in direct-mapped and set-associative caches. Multiple blocks can be mapped to a set, forcing evictions when the set is full.