Quiz #3

截止时间 4月17日 23:59 **得分** 10 **问题** 10
可用 4月15日 0:01 至 4月17日 23:59 3 天 **时间限制** 60 分钟

说明

Welcome to the Week #3 quiz!

Remember that this is due Sunday night at 23:59. Canvas is very unforgiving, so don't push it.

Also, remember that this is open-notes. Good luck!

尝试历史记录

	尝试	时间	分数
最新	尝试 1	8 分钟	10，满分 10 分

▶

ⓘ 正确答案将于 4月18日 0:01 提供。

此测验的分数： **10**，满分 10 分
提交时间 4月15日 10:34
此尝试进行了 8 分钟。

问题 1 1 / 1 分

Why does "Moore's Law of Clock Speed" no longer hold?

- Because connection lines on CPU chips can no longer be made that thin
- Because CPU clocks can no longer be made to run that fast

- (selected) It would result in way too much power consumption and require too much heat to be dissipated
- Because Moore's Law of Transistor Density no longer holds either

问题 2

1 / 1 分

The difference between L1 and L2 cache is

- L2 has two banks of memory, L1 only has one
- (selected) L1 is smaller and faster than L2
- L1 is larger and slower than L2
- Nothing -- they are two terms for the same thing

问题 3

1 / 1 分

Why did we talk about a dozen eggs in the Cache discussion?

- No logical reason -- it sounds cool
- (selected) Bringing home a dozen eggs when you only need 2 today is like the need for cache
- Because caches are easily broken
- Andy Warhol would have appreciated it this way

问题 4

1 / 1 分

Caches are at their very best when your code takes advantage of

- Singular and Temporal coherency
- Spatial and Temporal coherency
- Singular and Temporary coherency
- Spatial and Temporary coherency

问题 5

1 / 1 分

When adding up the elements of a 2D array in C or C++, it is faster to add the elements:

- Horizontally (i.e., across the rows) first
- It makes no speed difference either way
- Vetically (i.e., down the columns) first

问题 6

1 / 1 分

In terms of 32-bit (4-byte) floating-point numbers, the size of a cache line is:

- 8 floating-point numbers
- 64 floating-point numbers
- 32 floating-point numbers
- 16 floating-point numbers

问题 7

1 / 1 分

MESI stands for

- Modified-Exclusive-Single-Invalid
- Nothing, it is someone's name
- Modified-Exclusive-Shared-Invalid
- Modified-Exterior-Shared-Invalid
- Multicore-Exclusive-Shared-Invalid
- Modified-Exclusive-Shared-Instructions

问题 8

1 / 1 分

False Sharing happens because

- More than two threads are trying to read from the same cache line

- [x] One thread is accessing the same cache line that another thread is writing to
- [ ] Two threads are not sharing the same cache line, but should be
- [ ] Two threads are reading from the same cache line

问题 9

1 / 1 分

AMD recently achieved a remarkably-high CPU clock speed by:

- [ ] Running the CPU outside at the north pole
- [ ] Cooling the chip with four fans
- [x] Cooling the chip with liquid nitrogen
- [ ] Running the CPU in the Penguin Encounter at Sea World

问题 10

1 / 1 分

When performing a matrix multiply:

- [x] The order of the i-j-k for-loops makes a big difference in performance
- [ ] The order of the i-j-k for-loops makes a slight difference in performance
- [ ] The order of the i-j-k for-loops makes no difference in performance

测验分数： **10**，满分 10 分