Quiz #2

- Due Apr 14 at 11:59pm
- Points 10
- Questions 10
- Available Apr 12 at 12:01am - Apr 14 at 11:59pm
- Time Limit 60 Minutes

Instructions

OK, now you should be in the swing of things!

Same drill -- 10 points, 60 minutes to do it in. All open notes.

Good luck!

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	16 minutes	10 out of 10

ⓘ Correct answers will be available on Apr 15 at 12:01am.

Score for this quiz: 10 out of 10
Submitted Apr 13 at 10:51am
This attempt took 16 minutes.

Question 1
1 / 1 pts
Amdahl's Law says that we will probably never get 100% Speedup Efficiency. Why?

- Compilers will never be that good.
- There will always be heat generated by the cores.
- There will always be programming imperfdetions by less-than-perfect programmers
- There will always be a sequential fraction to our program, preventing infinite parallelism.

Question 2
1 / 1 pts
According to Amdahl's Law, what is the maximum speedup achievable?

- #cores
- 1/#cores
- 1/Fsequential

- 1/Fparallel

Question 3

1 / 1 pts

If you have a working multicore program, can you compute the $F_{parallel}$?

- No, it's too compliicated.
- Yes, but it will require more knowledge than we are covering here
- Yes, measure a speedup and use the inverse Amdahl's Law
- No, it's too unpredictable

Question 4

1 / 1 pts

What does Gustafson's Observation tell us about using Amdahl's Law?

- The speeduup stays about the same regardless of data set size
- Amdahl's Law was good for its time, but doesn't apply now.
- The situation is actually much worse than Amdahl's Law indicates
- Amdahl's Law is actually too pessimistic -- Fparallel increases as the data set size increases.

Question 5

1 / 1 pts

In OpenMP, what does the MP stand for?

- Mike Pailey
- Many Processes
- Much Parallelism
- Multi-Processing

Question 6

1 / 1 pts

True or False?

One of the great things about OpenMP is that it guarantees *identical behavior* across different vendors and hardware.

- True
- False

Question 7

1 / 1 pts

True or False?

OpenMP is deterministic in its scheduling. For example, a piece of code that looks like this:

```
omp_set_num_threads( 8 );

#pragma omp parallel default(none)

printf( "Hello, World, from thread #%d ! \n" , omp_get_thread_num( ) );
```

will always produce the same output on the same hardware.

- True
- False

Question 8
1 / 1 pts

In a parallel for loop in OpenMP, the clause:

default(none)

is

- an illegal syntax error
- OK, but only if you are an experienced expert
- likely to cause problems with the logic
- a good idea, but not required

Question 9
1 / 1 pts

The advantage of using the OpenMP **reduction** clause is

- Actually a disadvantage -- it can produce wrong, non-deterministic answers
- No advantage, it is just cleaner code
- It greatly speeds, and makes thread-safe, reduction operations
- It is less likely to result in a compiler error

Question 10
1 / 1 pts

A "Mutex" is

- A sound you make when you sneeze
- A "multiple texture" for graphics processing
- A "mutual text" message

- Another term for a "mutual exclusion lock"

Quiz Score: 10 out of 10