Quiz #2

Due Apr 10 at 11:59pm **Points** 10 **Questions** 10
Available Apr 8 at 12:01am - Apr 10 at 11:59pm 3 days **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	3 minutes	10 out of 10

Correct answers will be available on Apr 11 at 12:01am.

Score for this quiz: **10** out of 10
Submitted Apr 9 at 2:25pm
This attempt took 3 minutes.

Question 1

1 / 1 pts

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

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

Question 2

1 / 1 pts

According to Amdahl's Law, what is the maximum speedup achievable?

- (•) 1/Fsequential
- ( ) 1/#cores
- ( ) 1/Fparallel
- ( ) #cores

Question 3

1 / 1 pts

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

- 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 compliicated.
- No, it's too unpredictable

Question 4

1 / 1 pts

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

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

Question 5

1 / 1 pts

In OpenMP, what does the MP stand for?

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

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.

- True
- False

Question 8

1 / 1 pts

In a parallel for loop in OpenMP, the clause:

default(none)

is

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

Question 9

1 / 1 pts

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

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

Question 10

1 / 1 pts

A "Mutex" is

- (●) Another term for a "mutual exclusion lock"
- ( ) A "mutual text" message
- ( ) A sound you make when you sneeze
- ( ) A "multiple texture" for graphics processing

Quiz Score: **10** out of 10