2010 World City Cup
Abacus, Mental Arithmetic & Mathematics Competition

Objective:
The intent of this event is to propagate to a global audience the benefits and values derived from the teachings of abacus. In addition to introducing fundamentals skills of mental math, we hope to achieve the following:
- ❖ Cultivate to an audience of all ages the fundamental aspects of mental math.
- ❖ Demonstrate the benefits with the skills acquired from mental math.
- ❖ Promote the teaching standards shared across the network of mental math teachers.
- ❖ Develop world civic culture exchange.

Date: July 31 to August 2 (For schedule, please see Appendix III)

Locations: Aerospace Industrial Development Corporation
176 20 Lane Chung-Ching Road
Shalu Township
Taichung County, 43346, Taiwan

Sponsor: Chinese Academy of the Abacus

Participative groups:
Groups are separated into two Main Sections, Sections I and II
- ❖ Section I contains the following (in alpha order):
  Canada, Hong Kong, Indonesia, Macau, Malaysia, Singapore and the United States.
- ❖ Section II contains the following (in alpha order):
  China, Japan, Korea and Taiwan.
  Each Section is divided into two Groups: A, B
  Each Group contains grades 1, 2, 3, 4, 5, 6 and Middle school (Grade 7, 8&9) and Open Group (High School Grade 10, 11&12)

Scoring:
(1) The individual total scores include Abacus, Mental Arithmetic and Math. Each participant receives three individual scores and the sum of the scores is one's Total Score.

(2) If Total Scores are the same then lower scores in all three items will be compared. The one who has better scores will be ranked a higher position, and so on. If all items are the same then drawing will be used for positioning.

Awards:

Section I & Section II

There will be three types of trophies available for groups A and B

- Champion

  Students with the highest Total Score from each grade level will receive a champion trophy.

- Gold

  30% of the students from each grade level with Total Scores NEAREST To the Champion Total Score will receive a Gold Trophy.

- Silver

  The remaining students from each grade level will receive the Silver Trophy.

Grading Criteria:

Please follow the rules when answering your questions. No score is given for any violation of these rules:

Abacus and Mental Arithmetic:

a. Write your answers with Arabic numbers clearly. Unclear or ambiguous writing is counted as invalid.

b. No matter whether the answer is correct or not, a question with two or more answers is void.

c. Use a "comma (,)" to separate every third digit in a whole number which has 3 or more digits. Example: 5,384,200

d. Write two "zeros" or a "dash (-)" (also called hyphen or minus) after the "decimal point (.)" if it is a "monetary ($)" question. Examples: $4,832.00 or $4,832.—

e. Draw "double lines" to cross out entire numbers if you discover a mistake. Then write the correct answer under, or next to it. DO NOT USE an eraser or correction fluid to cover the wrong answer or to make a partial correction. **Examples: $~~34.78~~ $34.79 (valid); $34.~~78~~ $34.79 (invalid)**

f. Answers must be written on the assigned space or answer sheet.

g. For the Multiplication and Division of the Abacus in Group A, the $ Monetary calculations round to the second place after the decimal point; the Non- $ Monetary calculations round to the fifth place after the decimal point.

Mathematics:

a. Write your answers on the assigned space on the answer sheet. No score is given for violating this rule, nor will scores be given for answers given on scratch paper.

b. Besides the answer sheet, a blank piece of paper will be provided for use as scratch paper.

c. If a question has two answers, then no score will be given.

d. You may use the abacus as a calculating tool. Calculators are not allowed.

2010 World City Cup
Abacus, Mental Arithmetic & Mathematics Competition
(Appendix A: Contents of Group, Event, and Degree)

Group	Item		Contents of Degree	# of Questions	Score	Time Limits
A	**I** **Mental Arithmetic**	Multiplication	Questions for 4-, 5-, 6- and 7-digit whole numbers Examples: (25 questions for each) 2 digits × 2 digits = , 3 digits × 2 digits = , 3 digits × 3 digits = , 4 digits × 3 digits =	100	100	3 minutes
		Division	Questions for 4-, 5-, 6- and 7-digit whole numbers Examples: (25 questions for each) 4 digits ÷ 2 digits = 2 digits, 5 digits ÷ 3 digits = 2 digits, 6 digits ÷ 3 digits = 3 digits, 7 digits ÷ 4 digits = 3 digits	100	100	3 minutes
		Addition & Subtraction	\$ Monetary questions for ten 3-digit numbers, ten 3- and 4-digit numbers, ten 4-digit numbers, ten 4- and 5-digit numbers, and ten 6-digit numbers (10 questions for each)	50	100	3 minutes
	II **Abacus**	Multiplication	Questions for 6- and 7-digit whole numbers; \$ Monetary, non-monetary and mixed decimal questions for 8- and 9-digits numbers Examples: (5 questions for each) 3 digits x 3 digits = , 3 digits x 4 digits = (Whole number questions) 4 digits x 4 digits = , 4 digits x 5 digits = (\$ Monetary, non-monetary and mixed decimal questions)	20	100	6 minutes
		Division	Questions for 5- and 6-digit whole numbers \$ Monetary, non-monetary and mixed decimal questions for 7-, 8- and 9-digits numbers Examples: (5 questions for each) 5 digits ÷ 2 digits = 3 digits , 6 digits ÷ 3 digits = 3 digits, 7 digits ÷ 3 digits = 4 digits, 8 digits ÷ 3 digits = 5 digits	20	100	
		Addition & Subtraction	\$ Monetary questions for ten 6- and 7-digit mixed decimal; \$ Monetary questions for ten 7- and 8-digit mixed decimal (5 questions for each)	10	100	
	III **Mathematics**	Multiple Choice	The questions for each grade rest on the standards which the contestants learned in various cities.	15	150	15 minutes
		Fill Blanks		15	150	
B	**I** **Mental Arithmetic**	Multiplication	2 digits x 1 digit = , 3 digits x 1 digit = Whole numbers questions (25 questions for each)	50	100	3 minutes
		Division	3 digits ÷ 1digit = 2 digits, 4 digits ÷ 1 digit = 3 digits Whole numbers questions (25 questions for each)	50	100	3 minutes
		Addition & Subtraction	Five 2-digit numbers (20 questions), six 2-digit numbers (10 questions) Seven 2-digit numbers (10 questions), eight 2-digit numbers (10 questions)	50	100	3 minutes
	II **Abacus**	Multiplication	Questions for 4-, 5-, 6- and 7-digit whole numbers Examples: (5 questions for each) 2digits x 2 digits = , 2 digits x 3 digits = , 3digits x 3 digits = 4 digits x 3 digits = , Whole number questions	20	100	6 minutes
		Division	Questions for 4-, 5-, and 6-digit whole numbers Examples: 4 digits ÷ 2 digits = 2 digits (10 questions) 5 digits ÷ 2 digits = 3 digits & 5 digits ÷ 3 digits = 3 digits (5 questions) 6 digits ÷ 3 digits = 3 digits & 6 digits ÷ 4 digits = 2 digits (5 questions)	20	100	
		Addition & Subtraction	\$ Monetary questions for ten 2-4 digits mixed decimals (5 questions) \$ Monetary questions for ten 3- and 4-digit mixed decimals (5 questions)	10	100	
	III **Mathematics**	Multiple Choice	The questions for each grade rest on the standards which the contestants learned in various cities.	15	150	15 minutes
		Fill Blanks		15	150	