

2013 World City Cup

Abacus, Mental Arithmetic & Mathematics Competition

Objectives:

We promote appreciation for abacus and its rich culture in Chinese heritage through this Abacus, Mental Arithmetic, and Mathematics competition, during which we hope to achieve the following:

- (1) Share teaching and learning experiences across the network of mental math educators and students
- (2) Expand the skills of our youth
- (3) Encourage cultural exchanges and foster friendship amongst members from the world's cities

Date: July 28 – 30, 2013

Location: National Chiayi Senior High School, Taiwan

Sponsor: Chinese Academy of the Abacus

Competing Teams and Groups:

- (1) Competing teams:
 - a. District A Representatives: Taiwan, China, Japan, Korea, Malaysia and other regional cities
 - b. District B Representatives: USA, Hong Kong, Macau, Singapore, India, Canada and other regional cities
- (2) Groups within each competing team:
 - a. Grades 1-6
 - i. Kindergarten students are placed in Grade 1
 - b. Grades 7-10
 - c. Grade 10 and above

Registration:

- (1) **Eligibility:** All abacus and mental arithmetic students
- (2) **Registration period:** Now through May 25, 2013
- (3) **Application and fee:** As detailed in the application form and supplemental documents

Awards:

Individual Recognition

- (1) **Champion Award:** awarded to the competitor with the highest score from each grade level
- (2) **Gold medal:** awarded to the top 30% of competitors in each grade level per participating team
- (3) **Silver medal:** awarded to the competitors in each grade level per participating team, excluding Champion Award and Gold Medal recipients

Outstanding Competitor Award

Awarded to the competitor who is highest-performing in all competition categories

Best Instructor Award

Awarded to the instructors of Champion Award recipients

Competition content and criteria were agreed upon and established by the event organizers. If a need for change arises, discussion shall be conducted and agreement to modify competition specifics must be reached prior to the competition.

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 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.

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(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) $2 \text{ digits} \times 2 \text{ digits} =$, $3 \text{ digits} \times 2 \text{ digits} =$, $3 \text{ digits} \times 3 \text{ digits} =$, $4 \text{ digits} \times 3 \text{ digits} =$	100	100	3 minutes	
		Division	Questions for 4-, 5-, 6- and 7-digit whole numbers Examples: (25 questions for each) $4 \text{ digits} \div 2 \text{ digits} = 2 \text{ digits}$, $5 \text{ digits} \div 3 \text{ digits} = 2 \text{ digits}$, $6 \text{ digits} \div 3 \text{ digits} = 3 \text{ digits}$, $7 \text{ digits} \div 4 \text{ digits} = 3 \text{ digits}$	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) $3 \text{ digits} \times 3 \text{ digits} =$, $3 \text{ digits} \times 4 \text{ digits} =$ (Whole number questions) $4 \text{ digits} \times 4 \text{ digits} =$, $4 \text{ digits} \times 5 \text{ digits} =$ (\$ 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) $5 \text{ digits} \div 2 \text{ digits} = 3 \text{ digits}$, $6 \text{ digits} \div 3 \text{ digits} = 3 \text{ digits}$, $7 \text{ digits} \div 3 \text{ digits} = 4 \text{ digits}$, $8 \text{ digits} \div 3 \text{ digits} = 5 \text{ digits}$	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	$2 \text{ digits} \times 1 \text{ digit} =$, $3 \text{ digits} \times 1 \text{ digit} =$ Whole numbers questions (25 questions for each)	50	100	3 minutes
			Division	$3 \text{ digits} \div 1 \text{ digit} = 2 \text{ digits}$, $4 \text{ digits} \div 1 \text{ digit} = 3 \text{ digits}$ 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) $2 \text{ digits} \times 2 \text{ digits} =$, $2 \text{ digits} \times 3 \text{ digits} =$, $3 \text{ digits} \times 3 \text{ digits} =$, $4 \text{ digits} \times 3 \text{ digits} =$, Whole number questions	20	100	6 minutes	
		Division	Questions for 4-, 5-, and 6-digit whole numbers Examples: $4 \text{ digits} \div 2 \text{ digits} = 2 \text{ digits}$ (10 questions) $5 \text{ digits} \div 2 \text{ digits} = 3 \text{ digits}$ & $5 \text{ digits} \div 3 \text{ digits} = 3 \text{ digits}$ (5 questions) $6 \text{ digits} \div 3 \text{ digits} = 3 \text{ digits}$ & $6 \text{ digits} \div 4 \text{ digits} = 2 \text{ digits}$ (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		