

**Mathematical Database**  
**Website Resource Competition 2007/08**  
**Regulations**

**I. Aim**

The competition aims at arousing the interest of secondary school students in mathematics by encouraging them to create web resources related to mathematics. It also aims at broadening students' horizons in mathematics and promoting the learning of mathematics outside the classroom.

**II. Eligibility and Grouping**

1. All full-time secondary school students in Hong Kong (except members of 'Mathematical Database') are eligible to join the competition.
2. Participants may join as an individual or in groups (up to a maximum of 6 people).
3. The competition is divided into the Junior Section (Secondary 1 to 3) and the Senior Section (Secondary 4 to 7). For group entries, the section will be determined according to the highest form among all group members.

**III. Format of Entries**

1. Participants are free to create any entries which can be posted on the web, including articles, blog entries, book reviews, poems, stories, comics, movie clips, designs of mathematical games, mathematical game programmes, etc. They may also integrate more than one of the above formats in the same entry. Please refer to Part IV and Part X for the specifications for each format and examples.
2. There is no restriction on the topic and level of difficulty of the entries as long as they are related to mathematics.
3. Texts in the entries should be mainly in Chinese or English. Texts in Chinese should mainly consist of formal written Chinese for the ease of reading.
4. Each participant may submit up to three entries, whether they are individual or group entries.

**IV. Specifications of Entries**

1. Entries may be submitted in the form of electronic files or hard copies.
2. Articles, blog entries, book reviews, poems, stories and designs of mathematical games may be saved as .doc or .odt files using word-processing programmes like Microsoft Word or Open

Office. Accompanying figures may be inserted into the .doc or .odt file. All electronic submissions will be printed on A4-sized paper for adjudication. Such entries may also be handwritten neatly on A4-sized paper using black or blue ball pen, or printed on A4-sized paper (in case participants have difficulty in inputting mathematical symbols in the computer file, they may also include handwritten mathematical symbols on the computer printouts). Alternatively, participants may submit such entries in the form of a webpage by putting all files into a folder and then creating a .zip, .rar or .7z file.

3. Participants designing mathematical games must write down the name of the game, number of players, tools required, rules and the mathematical knowledge or techniques involved in the game.
4. Comics may be saved as .jpg, .png, .gif or .bmp files. All electronic submissions will be printed on A4 paper for adjudication. Such entries may also be submitted in hard copies by drawing directly on A4-sized paper, or printing on A4-sized paper, or creating a homepage, in which case all files should be saved into a folder and then create a .zip, .rar or .7z file.
5. Movie clips should be saved as .wmv or .mp4 files. Participants are advised to strike a balance between visual effect and limitations of web traffic in choosing the most suitable resolution. If participants wish to save movie clips into other file formats, they should e-mail [mdwrc08@gmail.com](mailto:mdwrc08@gmail.com) to enquire.
6. Mathematical game programmes should be put in the form of a webpage, and all files should be saved into a folder and then create a .zip, .rar or .7z file. Participants may also save the file in .swf (Flash file) format.
7. If comics, movies and mathematical game programmes are accompanied by separate texts, the same specifications on articles will apply to the texts part.
8. There is no restriction on the number of words, colours, lengths, etc., while consideration must be taken into so that the entries can be easily put on web.
9. For other types of entries, participants may e-mail [mdwrc08@gmail.com](mailto:mdwrc08@gmail.com) to enquire for any other specifications.
10. Each entry must be accompanied by an entry form during submission. In case a participant submits more than one entry, he/she must submit one entry form for each entry.

## **V. Submission of Entries**

1. Participants may submit their entries with the entry form by e-mailing to [mdwrc08@gmail.com](mailto:mdwrc08@gmail.com). The size of the e-mail must not exceed 19 MB.
2. Participants may also send their entries or discs containing their entries and the entry form to the following address by mail.

To: Mathematical Database (Website Resource Competition 2007/08)

c/o Mr Cheung Yun Kuen (PG Student)

Department of Mathematics

The Hong Kong University of Science and Technology

Clear Water Bay, Hong Kong.

3. An e-mail confirmation will be sent within 7 days of the receipt of entries.
4. The deadline for submission is at 5pm of 29th February, 2008 (Friday), based on the date of the postal chop (in case of hard copy submission) or the time of the e-mail server (in case of electronic submission).

## **VI. Adjudication**

1. All entries must satisfy the required specifications. The criteria for adjudication will be as follows:

Type of entries	General Requirement	Criteria for adjudication	Approximate Weighting
Articles/Blog Entries	Write an article to give an interesting and insightful exposition of a certain topic. Articles which emphasise too much on knowledge (e.g. materials commonly found in textbooks) are not suitable.	A deep and insightful view of the topic	★★★★
		Being thought-provoking and enlightening	★★★★
		Accuracy and rigour	★★★★
		Concise explanation of deep principles	★★
		Precise but concise use of words	★
Book Reviews	Pick a book (or a movie or a TV programme) and describe and comment on its mathematical contents, possibly with your own opinion. A mere description of its contents is not suitable.	Insightful personal view	★★★★
		Introduction of the mathematical contents	★★
		Concise explanation of deep principles	★★
		Accuracy and rigour	★
Stories/Poems	Create a story / one or more poems related to mathematics. In case of poems, participants may	Creativity	★★★★
		Relation with mathematics	★★★★

	include a separate text for explanation.	Lively and interesting presentation	★★
		Precise but concise use of words	★
Comics / Movie Clips	Create one or a series of comics / a movie clip to bring out a certain theme in mathematics. Preference goes to those comics / movie clips which can bring out the intended message more effectively than using texts. Participants may include a separate text for explanation.	Creativity	★★★★
		Relation with mathematics	★★★★
		Effective communication	★★
		Lively and interesting presentation	★★
		Artistic and technical level	★
Designs of Mathematical Games	Design a game related to mathematics so that it can be played among friends during gatherings.	Creativity	★★★★
		Relation with Mathematics	★★★★
		Educational value	★★
Mathematical Game Programmes	Create a computer game related to mathematics so that it can be played in common internet browsers. Participants may accompany the game with explanations in texts.	Creativity	★★★★
		Relation with Mathematics	★★★★
		Program Stability and User Friendly	★★★★
		Education value	★★
		Lively and interesting presentation	★★

2. If there are other types of entries or entries combining more than one format, a separate set of adjudication criteria will be suitably created.
3. The panel of adjudicators consists of the following members:
  - Prof AU Kwok Keung Thomas (Department of Mathematics, CUHK)
  - Dr CHEUNG Ka Luen (The Hong Kong Institute of Education)
  - Prof CHENG Shiu Yuen (Department of Mathematics, HKUST)
  - Dr LI Kin Yin (Department of Mathematics, HKUST)

## **VII. Announcement of Results**

1. Results of the competition will be announced in the Mathematical Database website (<http://www.mathdb.org>) in April 2008.
2. The Prizing Ceremony will be held in May 2008. Details will also be announced in the Mathematical Database website in due course.
3. Notification letters will be sent to the schools to which the winners belong.

### **VIII. Awards and Prizes**

1. There are gold, silver and bronze awards in each of the Junior and Senior Sections. The number of awards depends on the quality of the entries with no preset limit. The adjudication of entries from the Junior Section will be based on a slightly lower standard than those from the Senior Section.
2. The criteria for gold, silver and bronze awards are as follows:
  - Gold Award: Outstanding performance in all items of the adjudication criteria
  - Silver Award: Outstanding performance in most items of the adjudication criteria
  - Bronze Award: Good performance in most items of the adjudication criteria
3. Entries with a very impressive performance in some aspects will be presented a Special Award on top of the original award it gets.
4. Awardees of the special, gold, silver and bronze awards are entitled to the following prizes:
  - Special Award: \$500 book coupon and a grand prize
  - Gold Award: \$300 book coupon and a souvenir
  - Silver Award: \$200 book coupon and a souvenir
  - Bronze Award: \$100 book coupon and a souvenir

### **IX. Other Details**

1. Entries must be the original work of the participants (quotations of others' works must be specified) and have not been published before in public means such as newspapers, magazines, competitions and on the web.
2. Submitted entries will not be returned to the participants.
3. We may ask winners to produce proof of their study grade level.
4. The copyrights of the winning entries are jointly owned by the participants and our website.
5. We reserve the right to publish the winning entries in our website, possibly with suitable modifications.

6. Participants who violate the above regulations may be disqualified.
7. In order to be fair, members of ‘Mathematical Database’ may not enter this competition.
8. For enquiries, feel free to email to [mdwrc08@gmail.com](mailto:mdwrc08@gmail.com) .

## **X. Appendix: Examples of Entries**

Here are some examples of topics for entries. Participants may consider following these topics and formats, or they may create entries of any topic or format of entries that can be released on web, as long as they are related to mathematics.

- Articles / Blog Entries
  - Scoring Systems of Soccer Tournaments — Write an article to discuss the various scoring systems used in different soccer tournaments, and discuss the pros and cons of each.
  - The Mathematics of ‘Sudoku’ — Write an article to discuss the mathematics of ‘Sudoku’ or its variations, or write a computer program to solve ‘Sudoku’ problems, or create a ‘Sudoku’ game.
  - Participants may refer to “MD Blog” (the link is <http://mathdb.blogspot.com/> ) for blog entries.
- Book Reviews
  - We recommend the following books. Participants are free to choose other books / movies / TV programmes:
    - Mark Haddon, “The Curious Incident of the Dog in the Night-time”
    - Sarah Flannery, 《數學小魔女》, translated by 葉偉文
    - 李學數, 《數學和數學家的故事》
    - Dr. Amir D. Aczel, 《費馬最後定理》, translated by 林瑞雲
    - Prof. David S. Moore, 《統計，讓數字說話！》, translated by 鄭惟厚
- Comics and Movie Clips
  - Participants may create comics or movie clips based on a joke related to Mathematics.
  - Participants may make a short movie based on a Mathematics story (say history of Euler or Gauss) and invite their schoolmates to be directors, script writers and actors. You may even create your own story and make it a movie.