NMCC

Investigation

The investigation in NMCC is a mathematical task that the class should explore carefully. It is possible to solve the problem using various methods and strategies.

Advice will also be given to the teacher about how the work might be organised so that all of the pupils can make a contribution to the work that is undertaken in the class.

Mathematical ideas and procedures can be represented in many ways. We can use casual everyday language and the formal language of mathematics – both in spoken and written forms. We can use concrete materials, models and drawings to highlight a mathematical idea.

Criteria for assessing the specialisation

The work done by the class will be assessed by a jury consisting of teachers and mathematicians. The grounds for the assessment will be:

A. A subject report.
B. An exhibition, presentable to “an external audience”.
C. An oral presentation of A and B, presentable to “an external audience”.

NOTE:

The exhibition and oral presentation must be self-contained so that they can be assessed by two different juries respectively.

A Subject report

Formal requirements

The report must

- be submitted as a Word- or a pdf-document, preferably Word-file (*.docx).
- be written in 12 pt Times New Roman and with 1.5 line spacing. Headings may have a different size. The page numbers should be centralised at the bottom of the pages.
- consist of no more than 12 000 characters including spacing.
- have a front page: Title of the task, competition name (NMCC), year, nation, name of the school and class.
- have a table of contents with reference to page numbers.
- have references

The content.

The whole class should work on parts 1, 2 and 3 and make a joint subject report.

The report should mostly focus on part 1 and 2.

The content should

- present to the readers your interpretation of the task
- be well structured and offer the reader insight into
    - how the class has been working with parts 1, 2 and 3
    - how the class has struggled with the challenges during the work
    - the mathematical process and solutions obtained in part 1 and 2
    - how the teacher or others provided ideas, suggestions or challenges during the work
    - the way other resources have been used
- reflect and give examples upon your own learning

B Exhibition

During the final events, only the four pupils representing the class may prepare and carry out the exhibition.

The exhibition should focus on parts 2 and 3.

Formal requirements

The content of the exhibition must be brought to the location of the competition by the students. The exhibition can consist of poster(s) and objects placed on a table in front of the wall where the poster(s) are exhibited.

The poster(s) must fit in a frame size A0 portrait.

The text on the posters must have a minimum height of 2 cm and be easy to read.

The objects must fit on a rectangular table of size 0.5 m^2, usually 1 m long and 50 cm wide.

Characteristics of a good quality exhibition

A good exhibition should

- have an appealing form that catches the attention
- make young people curious about mathematics

C Presentation

The presenting pupils will have technical equipment, such as a projector (standard HDMI or VGA), speakers that can be connected to a computer and a whiteboard or flip-over at their disposal. The organisers of the event will be responsible for providing fully functional equipment.

Formal requirements

The participants must bring any other equipment they might need during the presentations and take responsibility that this equipment functions as it should.

During the final event, only the four pupils representing the class may prepare and carry out the presentation.

The presentation can last a maximum of 10 minutes.

Characteristics of a good quality presentation

A good presentation

- has a clear introduction where the pupils outline what they have been working on
- focuses on the pupils and minimal the use of media such as film and recorded music
- shows that the four pupils can convey a mathematical message in a way that captures the attention and interest of the audience
- demonstrates that the members of the group at the stage understand the mathematics they have been working with and that they have all been participating actively
- uses simple materials or accessories to highlight the message
- expresses the message through for example sketches, role-play, ”interviews”, original songs or similar. The presentation should not merely consist of reading a script.

Marks

Subject report, maximum 20 points

Up to 3 points can be deducted from a report that does not meet the formal criteria.

Exhibition, maximum 10 points

Up to 2 points can be deducted if the exhibition does not meet the formal criteria.

Oral presentation, maximum 10 points

Up to 2 points can be deducted if formal criteria are not met.