1 Overview

Mathematical ideas are often complicated and multi-faceted, which presents a genuine challenge to both students (trying to learn a concept) and teachers (trying to explain a concept). Though many different strategies have been employed throughout history to communicate mathematics in an intelligible way, the primary medium that has been used by mathematicians has been in the form of written text. It is well-suited to the structure of linear thought, and is easily shared because it is a cheap and accessible format.

In recent years, the rise of various technologies (e.g. the internet, mobile devices, cameras) has meant that *short-form video* is now increasing in popularity and use. Students find it a useful resource (for learning) and teachers find it a powerful tool (for explaining).

2 Task Requirements

In groups of 4-5, students will create a digital video that satisfies the following conditions:

- Consists of an informative presentation about or applying any topic in mathematics related to or an extension of the students' syllabus level, targeted at their peers
- Include both audio and visual components
- Between 90 and 180 seconds long
- Be original

The final video must contain a title, credits, and a Creative Commons BY-NC-ND 3.0 AU license. If any students are physically identifiable in the video clip, guardian permission must be secured and submitted in hardcopy.

3 Marking Rubric

Students must submit AT4 by USB (or a suitable file-sharing service) in two stages:

- Stage 1 (draft): during or before scheduled lesson Wed 22 October (Week 3, Term 4).
- Stage 2 (final product): during or before scheduled lesson Fri 31 October (Week 4, Term 4).

Projects will be assessed on the following criteria:

- Accuracy and quality of mathematics presented
- Innovative approach to presenting mathematics
- Creativity of overall presentation
- Quality of production

After all groups' videos are submitted, the best will be nominated and submitted as the CTHS entry to the *Maths via Digital Media Competition* administered by the University of Wollongong.

Level of competence demonstrated	Marks
Demonstrates sophisticated understanding of mathematics and highly-developed communication skills by: ▸ conveying a difficult mathematical concept/skill in an accurate fashion ▸ showing the concept/skill in an engaging and interesting way ▸ producing a creative and original presentation ▸ utilising the highest possible production values in the final product	13-15
Demonstrates strong understanding of mathematics and reasonable communication skills by: ▸ conveying a mathematical concept/skill in an accurate fashion ▸ showing the concept/skill in an interesting way ▸ producing a creative presentation ▸ utilising substantial production values in the final product	9-12
Demonstrates basic understanding of mathematics and elementary communication skills by: ▸ conveying a mathematical concept/skill in an accurate fashion ▸ producing a creative presentation	5-8
Demonstrates limited understanding of mathematics and some communication skills by: ▸ conveying a mathematical concept/skill ▸ producing a derivative presentation	1-4
Non-attempt	0