

SMAT 4002 Singapore Math L4

Project I A Model Workshop

- How to Design and Make a Model-

Version: 2024/3/27

Due: 2024/4/26

Instructor: Franky Chan

INTRODUCTION

Now that you have recently learned about **lines, angles, the internal relationship between the two concepts** and the calculation of the **perimeter and area** of a given rectangular, you can design something interesting by applying what you learned. This project is aimed at improving your ability to solve mathematics problems, motivation to turn what's in your mind into reality and practicing your skills through the experience of hand-making. Wish you would have fun!

HINTS (actually there are mainly four different stages in this project)

Here is a possible progress for your project. First of all, you should **set up a target** before anything starts. Then, you need to **make a rough graph** that can express the initial idea of your design. Afterwards, you need identify the most critical components in your design and **put forward some reasonable and practical ideas** to handle the difficulties you may encounter. Finally, just go for it!

PREPARATION (some knowledge, tools or materials you may use)



Know how to draw a pair of **parallel or perpendicular lines**



Know how to use a pencil compass and the way to **measure or graph an angle**



Know how to measure the sides of a piece of **rectangular**-shaped paper



Prepare some tools to **cut out the shape** and **assemble** all the components



Prepare some **cards** (hard ones are better, for **stability**, over 400g/m² are recommended)



PAY ATTENTION WHILE USING THESE TOOLS OR YOU MAY GET HURT!

SCORING

- A **draft** with a brief **description** of your design (Characteristic: Clear and Creative) **[30%]**
- A **report** of the **process** while you are overcoming anything difficult **[40%]**
- Some **Photos** of your designed **model** (using camera)(at least from two angles) **[10%]**
It is recommended that your photos and your graph are **easy to compare** with each other.
- An **expressive essay** (120~180 words is better) to describe your feelings and harvest**[20%]**

LATE POLICY: A penalty of **0.5%** of your final grade for each late day. (count per 24 hrs)

SUBMISSION

Please packed all your materials in a **single (*.zip) file** and upload it in time.

SAMPLE

A sample of a **draft** and **report** will be uploaded later. **[time: TBD]**