

Mathematics is widely used in our daily life. To start with, I tried to find out its beauty at my school. Therefore, I observed the whole school, even inconspicuous corners.

First of all, I studied the fire resisting door. Arcs and sectors were formed when the door is open and close. I calculated the arc length and area of sector. And I found that the angle was proportional to the arc length and the area of the sector.

Secondly, the semi-cylindrical building of my school was also interesting. When I walked around the stairs every day, I always wondered how big the base of the semi-cylindrical building was. Since the centre of the semi-circle was buried inside the pillar, it was difficult to measure it. However, with the help of the 8 identical windows on the semicircle, it could be estimated by using trigonometric ratios.

Thirdly, the opening of the 8 identical windows was also my concern. On a windy day, I found that they were completely opened. How would the positions of the window hinges be changed if I tried to half close the windows? Then I drew the side view of one of the windows and used Cosine Law to solve the problem.

Finally, the tessellated floor was also fascinated. The basic unit consisted of two squares of different sizes and a rectangle. The pattern of the floor was formed by repeating translating the basic units.

Beside finding the beauty of Mathematics at inconspicuous corners, I have learned drawing skills such as colour matching and composition. In addition, I also learn to express my ideas in clear infographics. Although I felt hard in measuring angles and lengths in the beginning, I am satisfied once I made it! To conclude, I enjoy this research process very much.