

Year 8 Maths Summer Homework

Explore how mathematics plays a crucial role in designing and constructing buildings and structures.

Instructions:

1. **Research:** Spend 10 minutes researching the following topics related to architecture and mathematics:
 - **Golden Ratio:** Investigate how architects use the golden ratio to create aesthetically pleasing proportions in buildings.
 - **Symmetry:** Explore how symmetry is applied in architectural designs.
 - **Geometry:** Learn about geometric shapes commonly found in architecture (e.g., triangles, rectangles, circles).
 - **Area and Volume:** Understand how architects calculate areas and volumes for rooms, walls, and other architectural elements.
 - **Scale Drawings:** Discover how architects create accurate scale drawings of buildings.
2. **Case Study:** Choose a famous building or structure (e.g., the Eiffel Tower, Taj Mahal, Sydney Opera House) and find out:
 - Its architectural features.
 - How mathematics influenced its design.
 - Any interesting mathematical concepts used during construction.
3. **Create a Poster or Presentation:**
 - Summarize your findings in a visually appealing poster or a short presentation.
 - Include images, diagrams, and explanations.
 - Highlight the mathematical aspects you discovered.

Have fun exploring the fascinating world where math meets architecture! 