



AI generated Image, 2025

Quarterly Problem

-Math Edition-

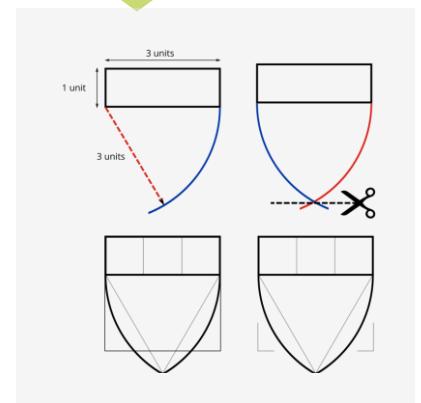
Mathematics-History-Art and YOU



Summer holiday walks call for interesting adventures! As you walk through your city or the town you are visiting, pay close attention to important or interesting houses and read historical or current information boards. But especially look out for special geometric shapes, such as the city's emblem or the symbol of an important family or sports club. This kind of visual sign is called a **coat of arms**. The science that deals with the study of the history and symbolism of coats of arms, and which also deals with the verification of their accuracy and the creation of new coats of arms, is called **heraldry**. Heraldry is the original and oldest manifestation of the "unified visual style" in Europe, and the first coats of arms were created in the 12th century.

Task: We invite you to create a **project** about the coats of arms that you find on your walks. Take concise photos of the coats of arms you find and create a catalogue from them. Choose the most interesting coat of arms and try to find out as much as possible about it! But don't just learn about what or who the coat of arms represents, analyze the coat of arms and the shapes in it mathematically: How many colours are on the coat of arms? Is any colour dominant? What percentage of the area of the entire coat of arms does it occupy? Are the symbols on the coat of arms symmetrical? Can you insert a photo of the coat of arms into dynamic geometric software and create a stylized geometric image of it? How could the rounding of the lower part of the coat of arms be drawn correctly? And finally: Start writing your own art-mathematical history! Prepare a design for your own coat of arms! It can be your personal symbol, a symbol of your class or school, or a new, modern symbol of your family or your sports club! Prepare the most beautiful, high-quality and carefully crafted image and write your interesting story.

My favourite colours?
My favourite shapes?
Starting a new history ...
My Original Coat of Arms!



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Whose project is the most interesting?

Focus on phrasing your findings in a clear and comprehensible way. Also state what foundation you have used for your project.