

$$M = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$$

Math League: the 15th week

Math in chemistry

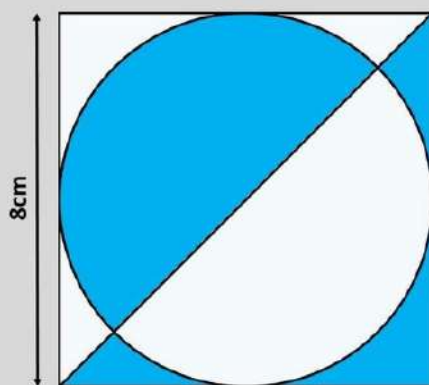
Math plays a crucial role in chemistry, serving as the foundation for many principles and calculations. From balancing chemical equations to determining reaction yields, mathematical skills are essential. Stoichiometry involves converting between moles, grams, and molecules using mathematical ratios. Concentration calculations, such as molarity and molality, rely on algebraic formulas to quantify solutions. Chemical kinetics requires calculus to analyze reaction rates and mechanisms.

Thermodynamics involves mathematical expressions to understand energy changes and equilibrium constants. Statistical analysis is used to interpret experimental data and ensure accuracy. Mathematical modeling helps predict chemical behavior and optimize reactions. Thus, the ultimate understanding of chemical processes often depends on the ability to delve deeply into mathematical concepts.



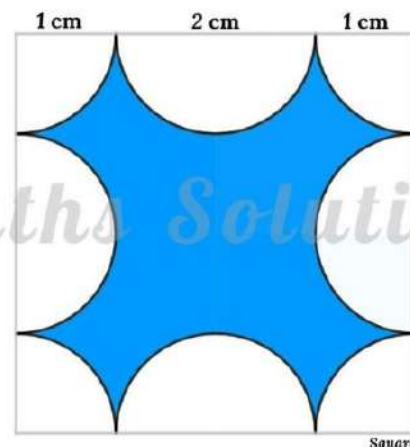
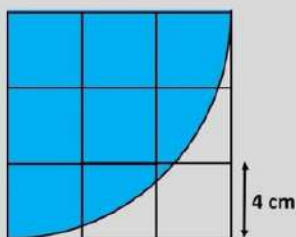
$$V = \pi r^2 h$$

What is the area of the shaded region if it's a square of side 8cm?



CAN YOU SOLVE THIS?

What is the area of the unshaded region of the square?



Blue Area = ?

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$