

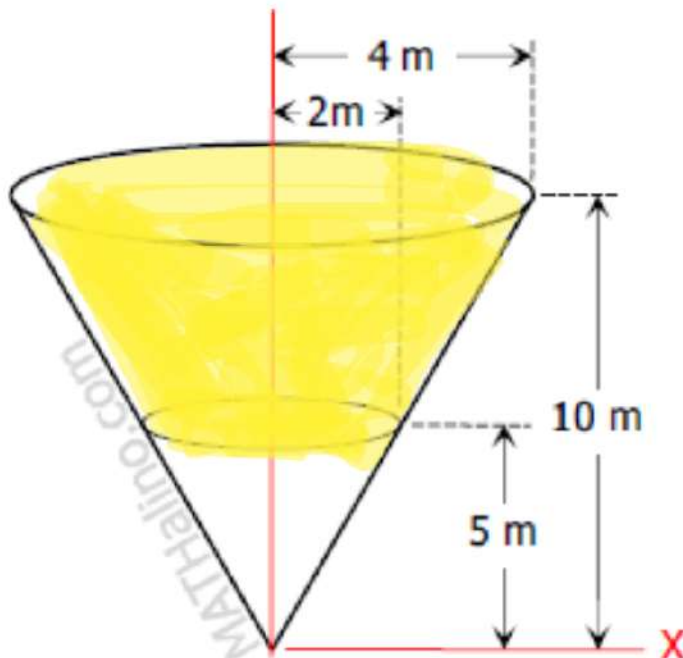
$$M = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$$

Math League: the 11th week

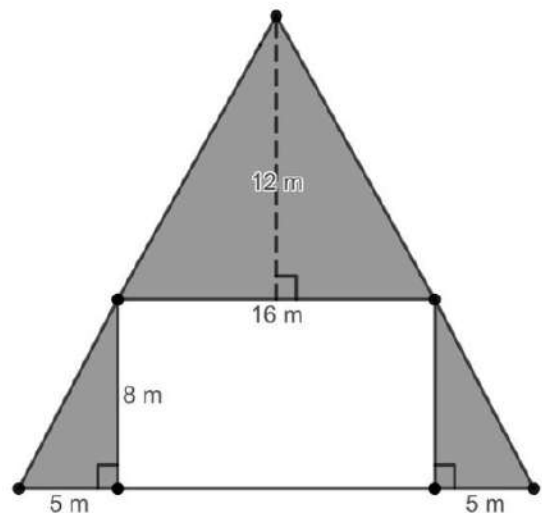
The study of 3D shapes in mathematics has evolved significantly over time. Early civilizations, such as the Egyptians, applied geometric principles in constructing pyramids. Ancient Greeks like Euclid and Archimedes contributed foundational knowledge about polyhedra, exploring their properties and relationships.

The 17th century introduced analytical geometry through René Descartes and Pierre .de Fermat, allowing algebraic descriptions of 3D shapes using coordinate systems. The 19th and 20th centuries brought advancements in topology and non-Euclidean geometry by figures like Carl Friedrich Gauss and Bernhard Riemann, expanding the understanding of spatial dimensions.

,Today, the study of 3D shapes is crucial in fields like computer graphics architecture, and engineering, reflecting the lasting impact of these early mathematical developments.



Find the area of the shaded region.
Be ready to justify your thinking.



Enjoy those problems!

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