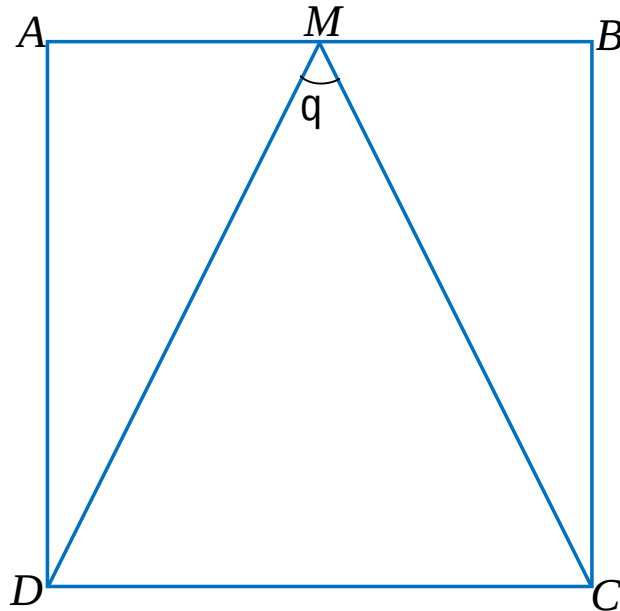


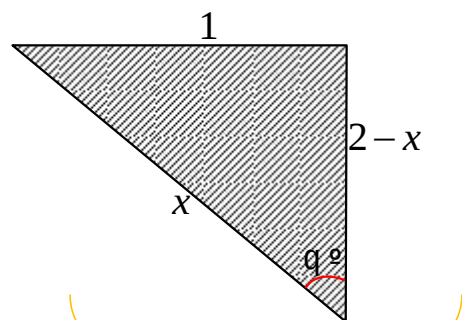
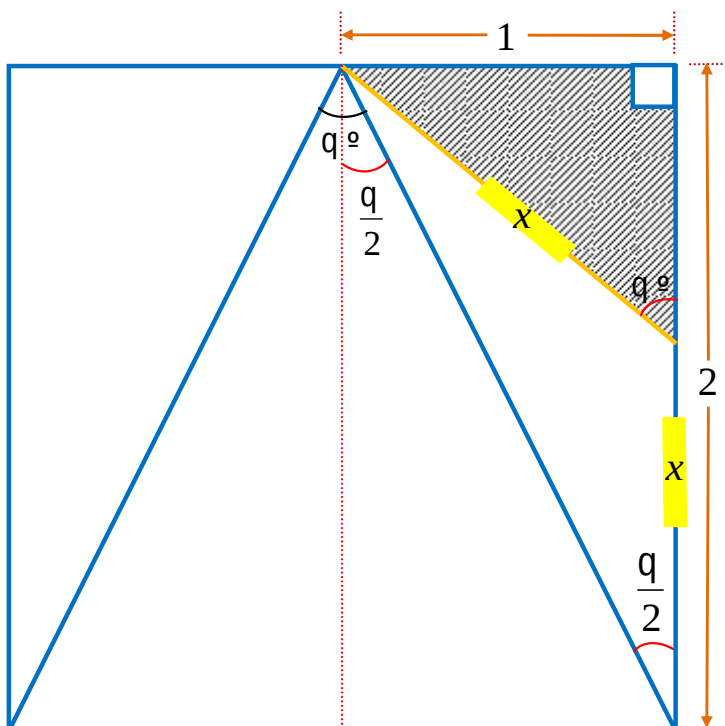


PROBLEMA PARA EXPOSICIONES

Dado el cuadrado, determine el valor de secante del ángulo theta, sabiendo que el punto M se ubica en el medio de AB. (Lado del cuadrado: $n \in \mathbb{Z}^+$)



RESOLUCIÓN (1) (MÉTODO DEL TRIÁNGULO DE ÁNGULO MITAD)



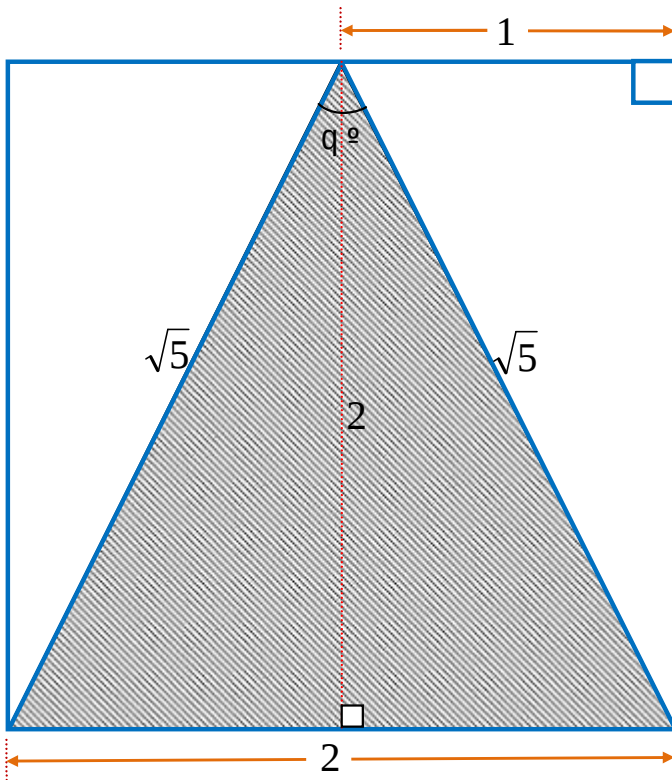
$$T.Pitágoras: x = \frac{5}{4}$$

$$\therefore \sec \theta = \frac{x}{2-x} = \frac{5}{3}$$

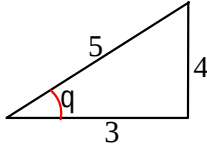




RESOLUCIÓN (2) (MÉTODO DE ÁREAS DE TRIÁNGULO)



$$\Rightarrow S_{\Delta} = \frac{\sqrt{5} \cdot \sqrt{5}}{2} \operatorname{Sen} q = \frac{2 \cdot 2}{2}$$

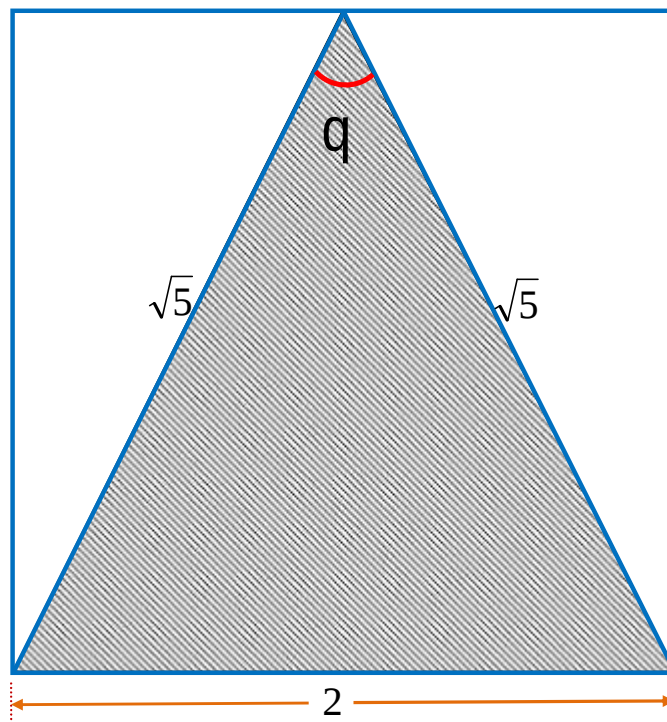
$$\operatorname{Sen} q = \frac{4}{5} \rightarrow$$


$$\therefore \operatorname{Sec} q = \frac{5}{3}$$





RESOLUCIÓN (3) (MÉTODO DE LEY DE COSENOS)



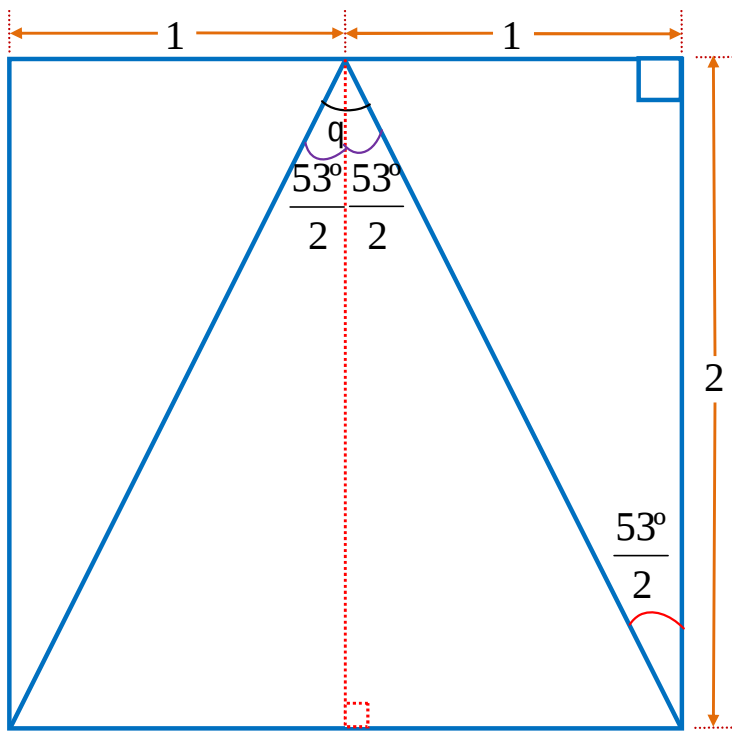
$$\Rightarrow 2^2 = \sqrt{5}^2 + \sqrt{5}^2 - 2\sqrt{5} \cdot \sqrt{5} \cdot \cos q \Rightarrow \cos q = \frac{3}{5}$$

$$\therefore \sec q = \frac{5}{3}$$





RESOLUCIÓN (4) (MÉTODO DE ÁNGULOS NOTABLES)



$$\rightarrow q = \frac{53^\circ}{2} + \frac{53^\circ}{2} = 53^\circ$$

$$\therefore \sec 53^\circ = \frac{5}{3}$$

