Herleitung Formel Pyramidenvolumen
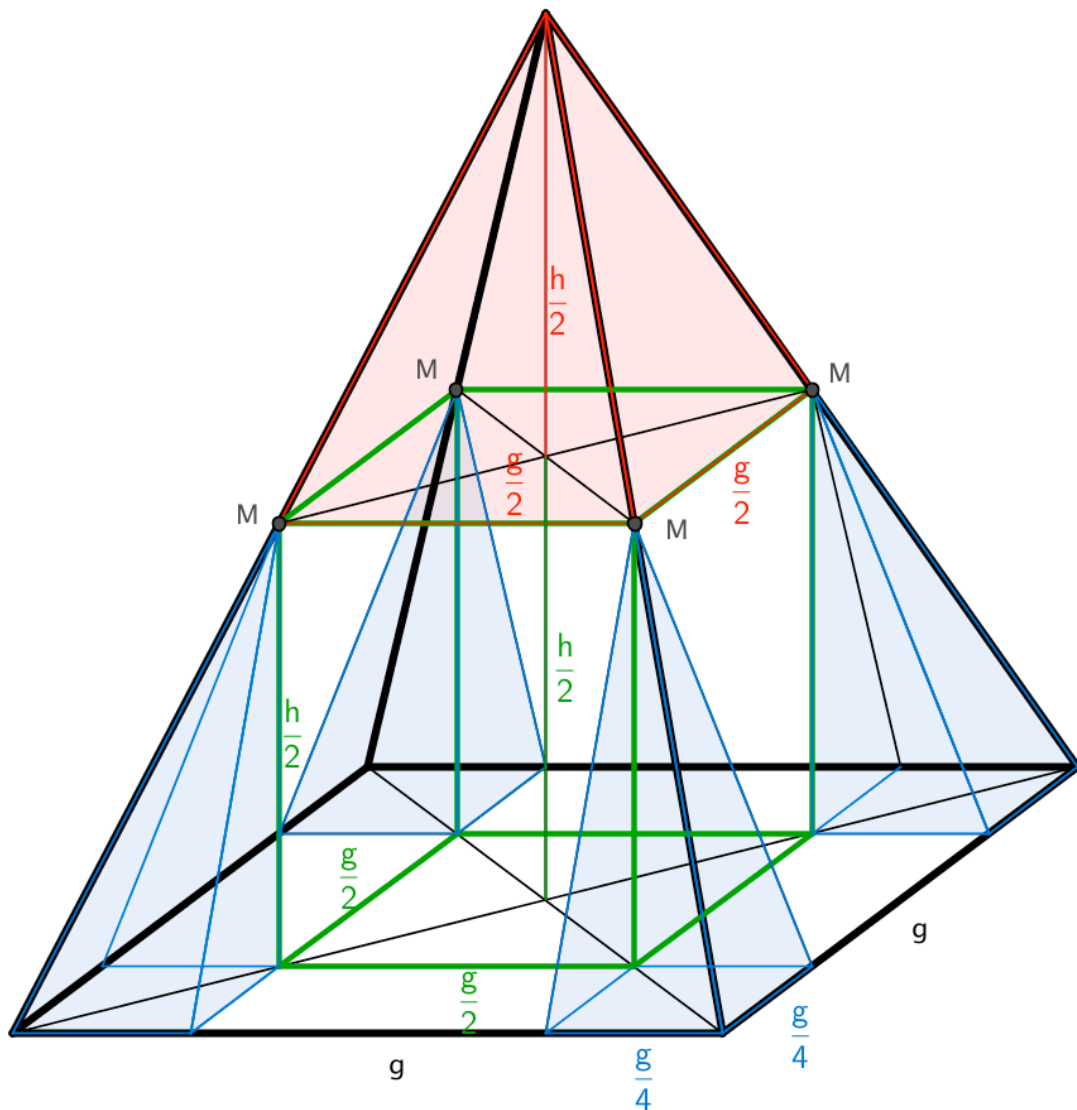
Quader grün	:	$V =$

Pyramide rot	:	$V = \dfrac{\square}{\square} \cdot V_{Pyramide}$

Pyramide blau	:	$V = \dfrac{\square}{\square} \cdot V_{Pyramide\ rot}$

,Keil' weiss	:	$V = \dfrac{\square}{\square} \cdot V_{Quader}$

Pyramide   :

$$V_{Pyramide} \;=\; V_{Quader\ grün} \;+\; V_{Pyramide\ rot} \;+\; \square \cdot \frac{1}{4} \cdot V_{Pyramide\ rot} \;+\; \square \cdot \frac{1}{4} \cdot V_{Quader\ grün}$$

$$=\; V_{Quader\ grün} \;+\; V_{Pyramide\ rot} \;+\; V_{Pyramide\ rot} \;+\; V_{Quader\ grün}$$

$$=\; \square \cdot V_{Quader\ grün} \;+\; \square \cdot V_{Pyramide\ rot}$$

$$=\; \square \cdot \frac{\square^2 \cdot \square}{\square} \;+\; \square \cdot \frac{\square}{\square} \cdot V_{Pyramide}$$

$$=\; \frac{\square^2 \cdot \square}{\square} \;+\; \frac{\square}{\square} \cdot V_{Pyramide} \qquad\qquad\qquad I \;\cdot 4$$

$$4 \cdot V_{Pyramide} \;=\; \square^2 \cdot \square \;+\; V_{Pyramide} \qquad\qquad\qquad I \;- V_{Pyramide}$$

$$3 \cdot V_{Pyramide} \;=\; \square^2 \cdot \square \qquad\qquad\qquad\qquad I \;: 3$$

$$V_{Pyramide} \;=\; \frac{\square^2 \cdot \square}{\square}$$

$$V_P \;=\; \frac{G\underline{\qquad\qquad} \cdot\; H\underline{\qquad}}{\square}$$