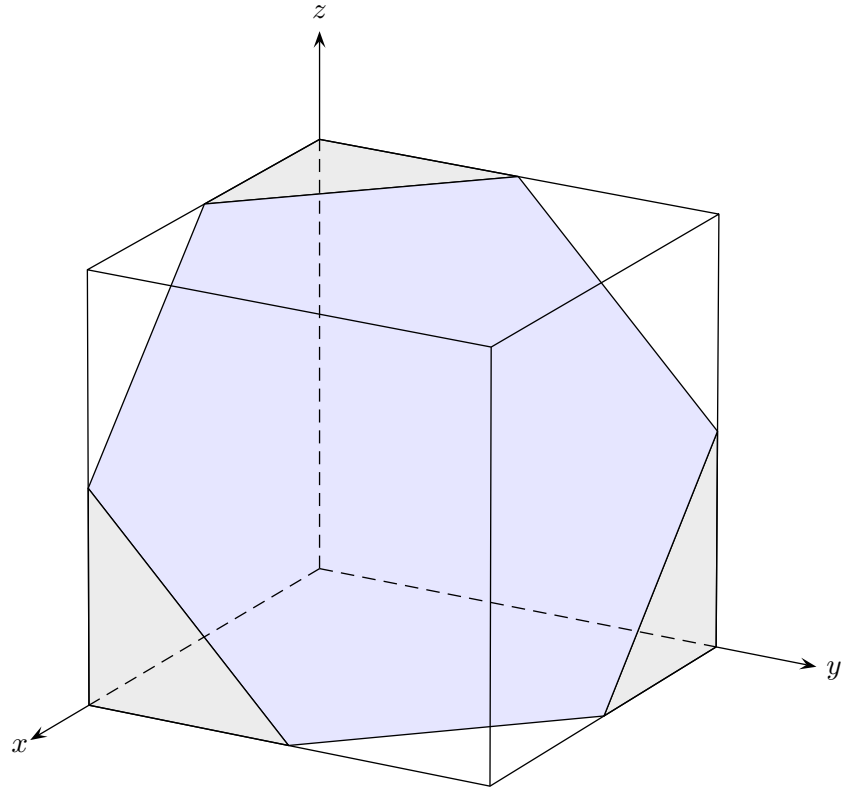
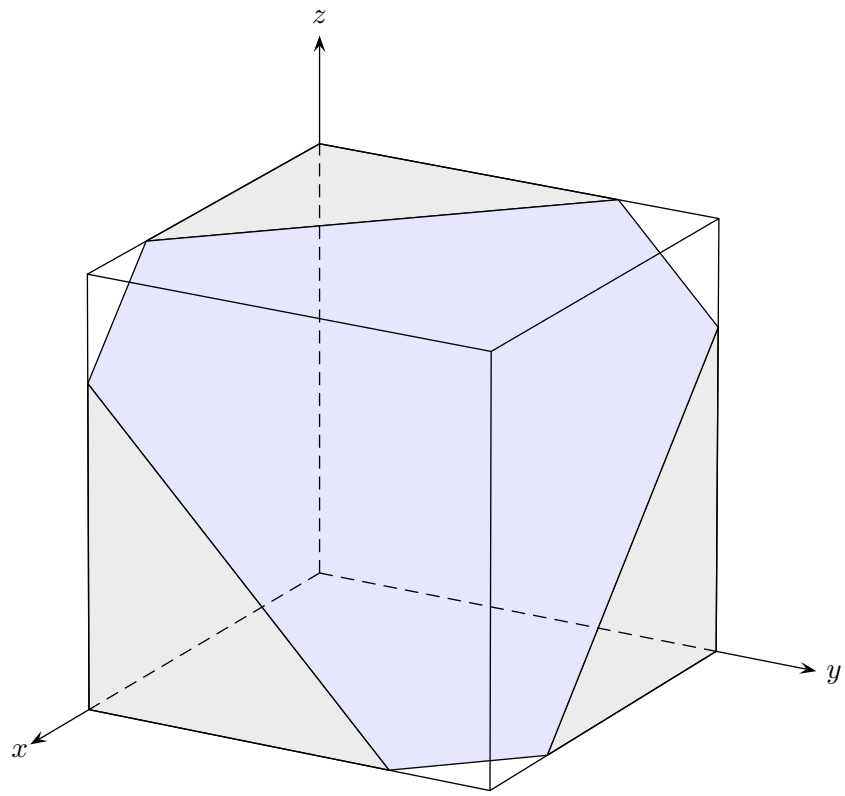
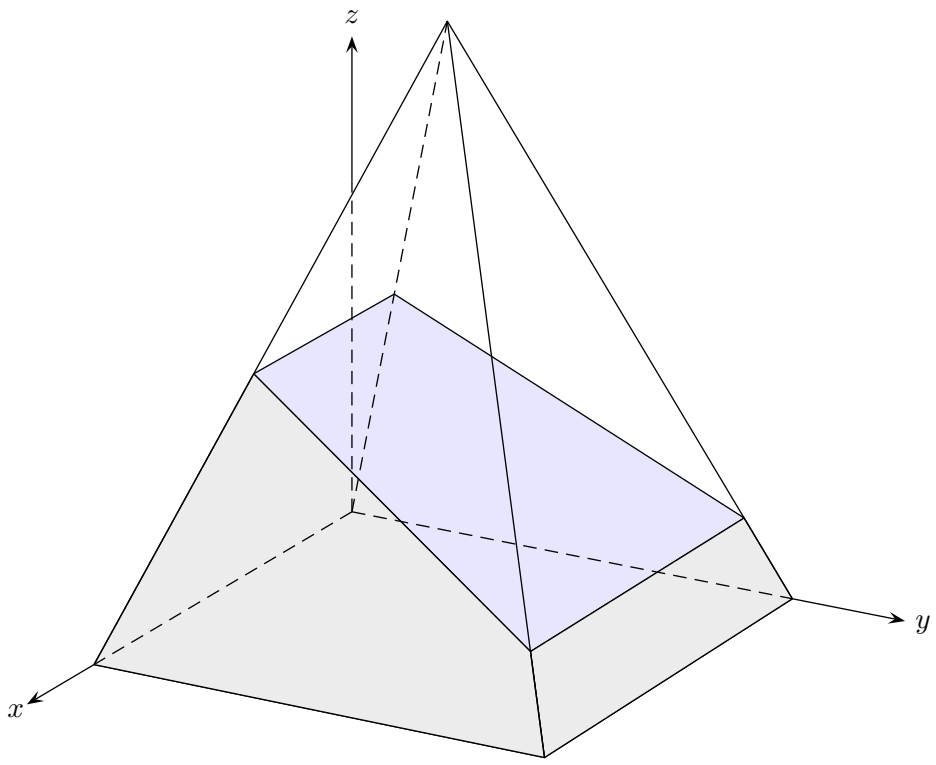
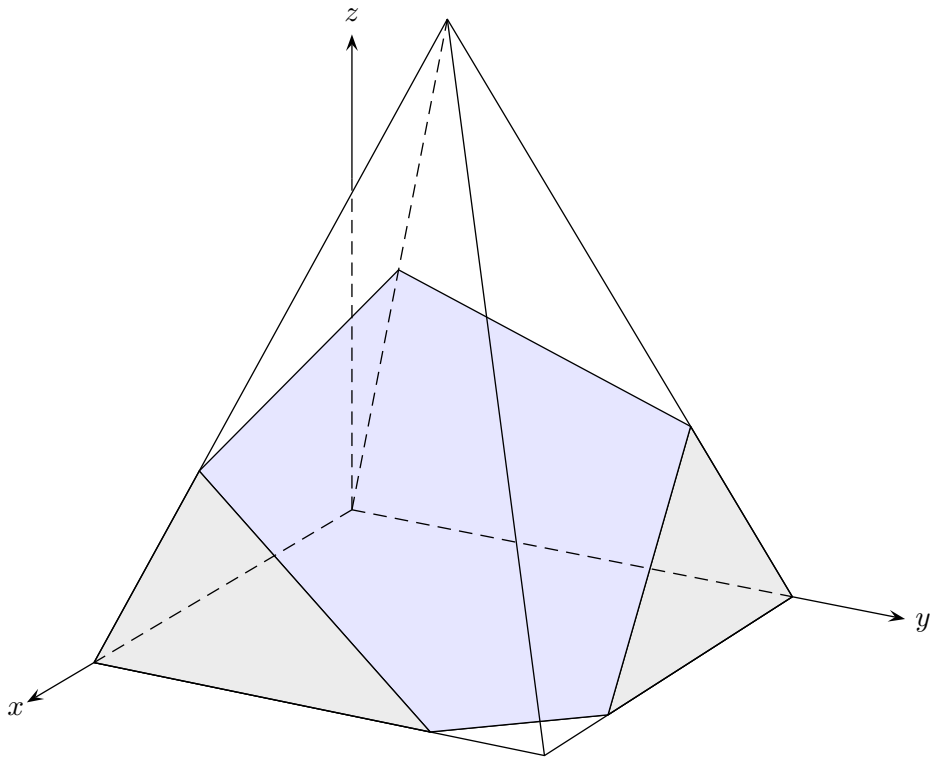


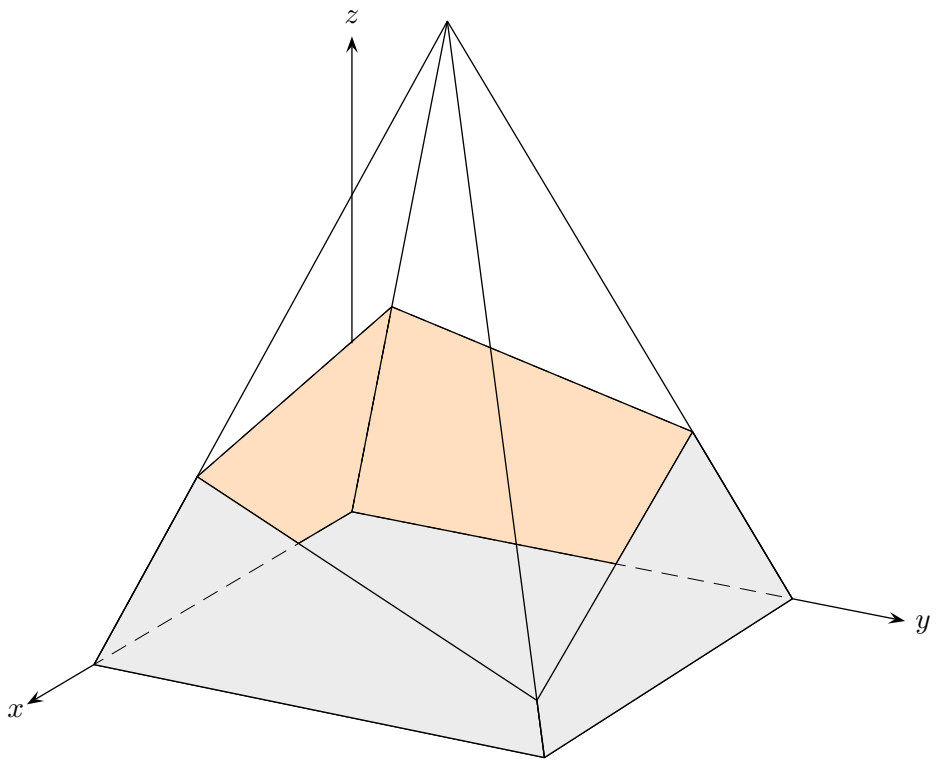
Schnitte

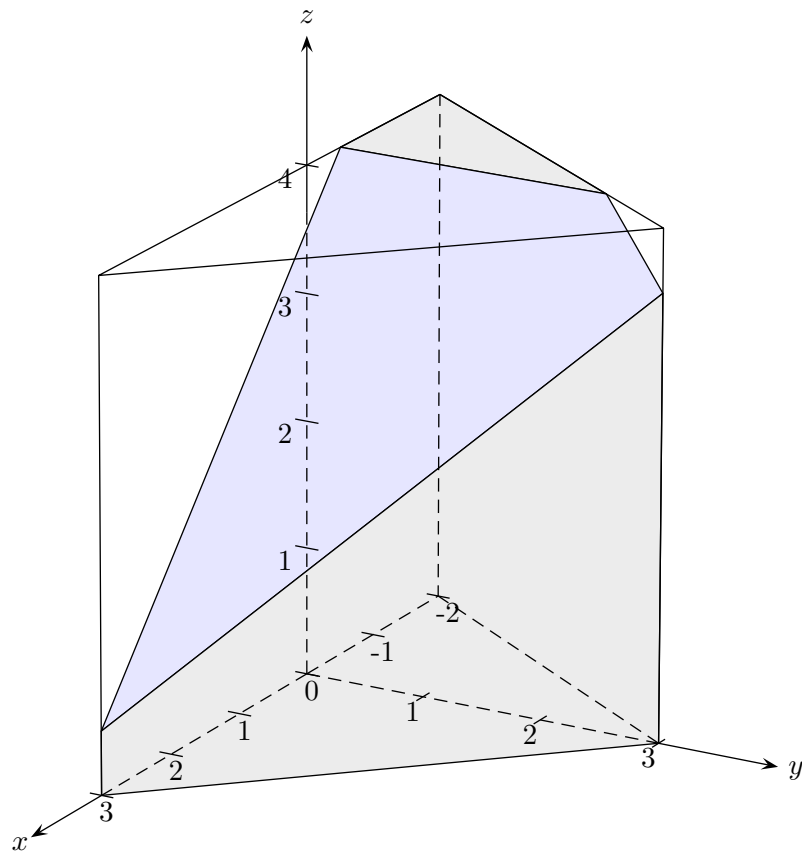




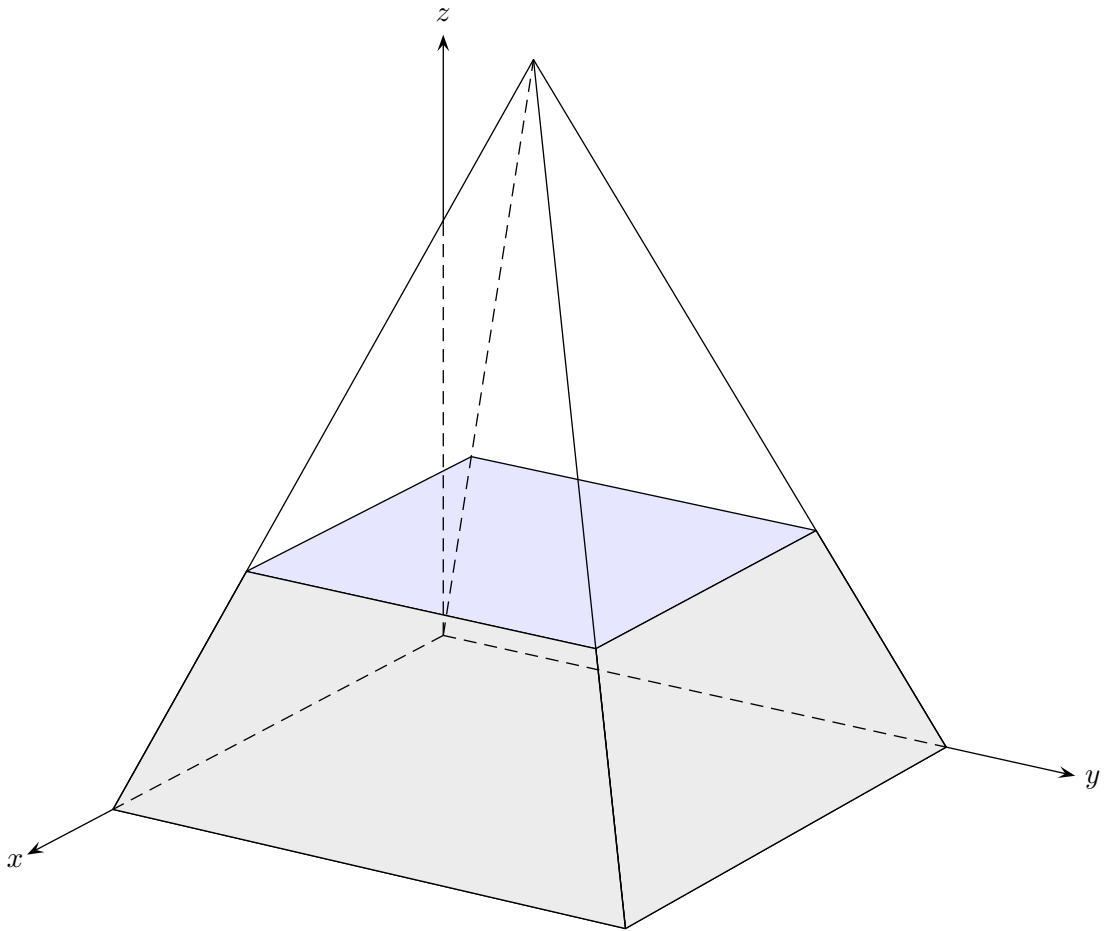




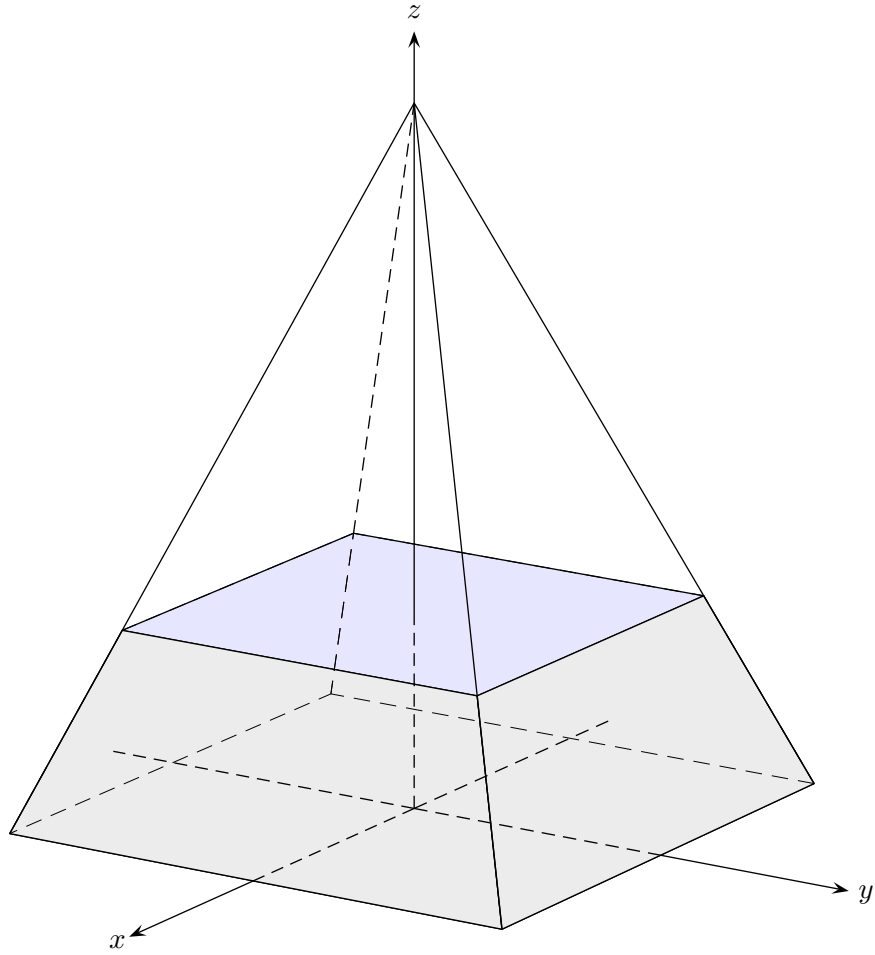




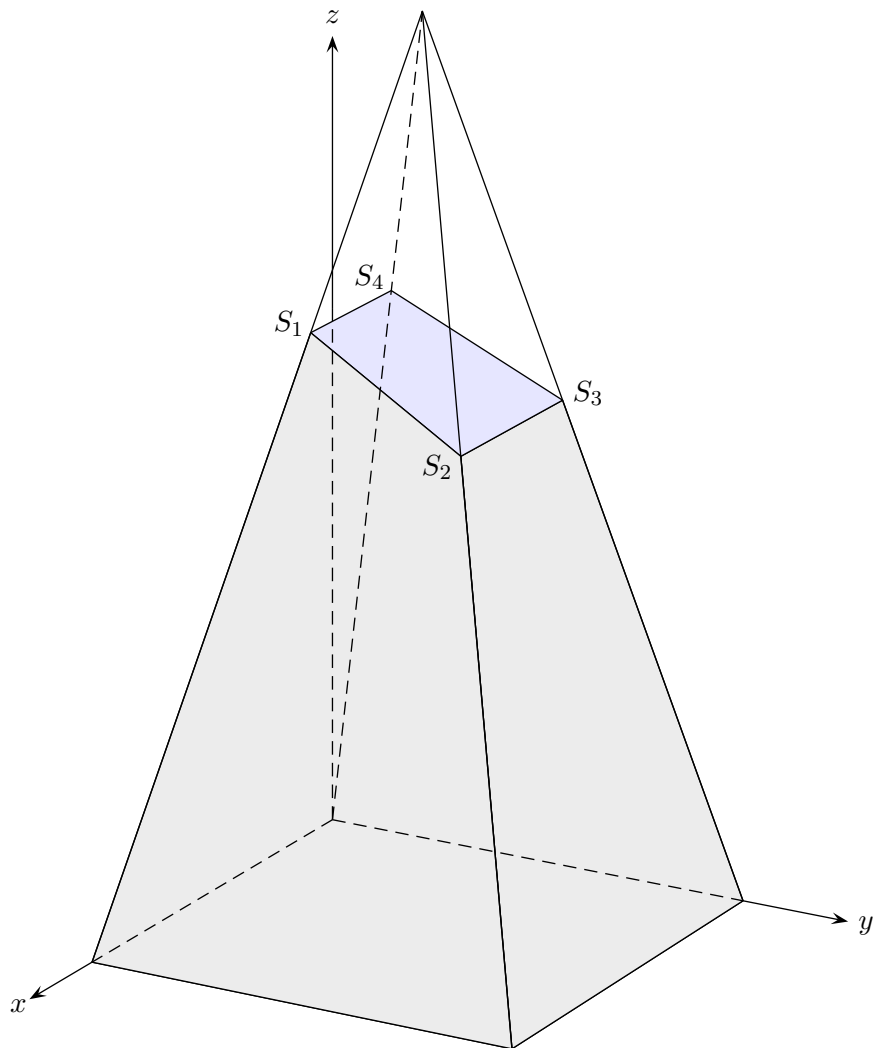
Pyramidenstumpf



Pyramidenstumpf



Ebene schneidet Pyramide



Eine quadratische Pyramide mit der Grundflächenkante $a = 4$ und der Höhe $h = 8$ wird von der Ebene

$$E: \vec{x} = \begin{pmatrix} 4 \\ 4 \\ 4 \end{pmatrix} + \lambda \begin{pmatrix} 1 \\ 0 \\ 0 \end{pmatrix} + \mu \begin{pmatrix} 0 \\ 2 \\ -1 \end{pmatrix} \text{ geschnitten.}$$

Berechnen Sie die Schnittpunkte mit den Pyramidenkanten.

Ebene schneidet Pyramide

$$\vec{OS}_1 = \frac{1}{3} \begin{pmatrix} 8 \\ 4 \\ 16 \end{pmatrix}$$

$$\vec{OS}_2 = \frac{1}{7} \begin{pmatrix} 20 \\ 20 \\ 32 \end{pmatrix}$$

$$\vec{OS}_3 = \frac{1}{7} \begin{pmatrix} 8 \\ 20 \\ 32 \end{pmatrix}$$

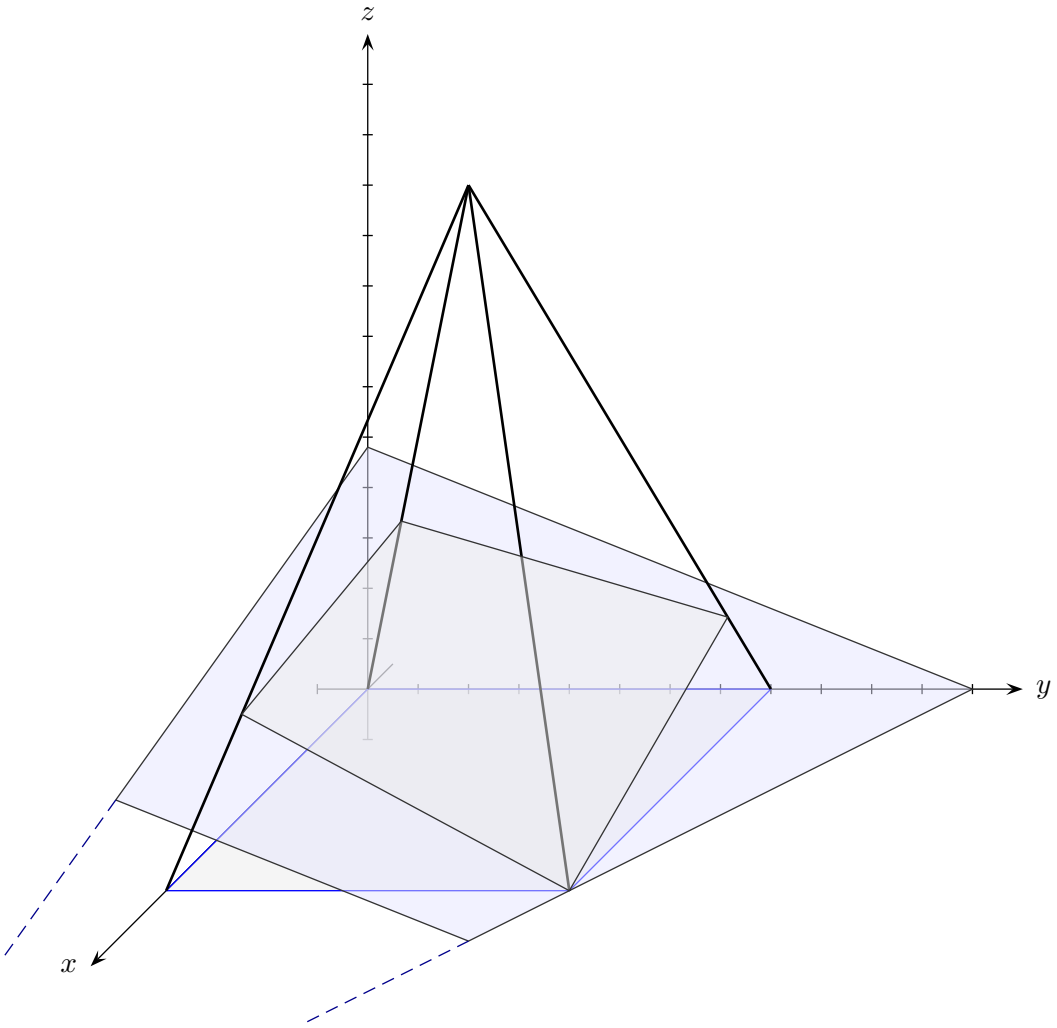
$$\vec{OS}_4 = \frac{1}{3} \begin{pmatrix} 4 \\ 4 \\ 16 \end{pmatrix}$$

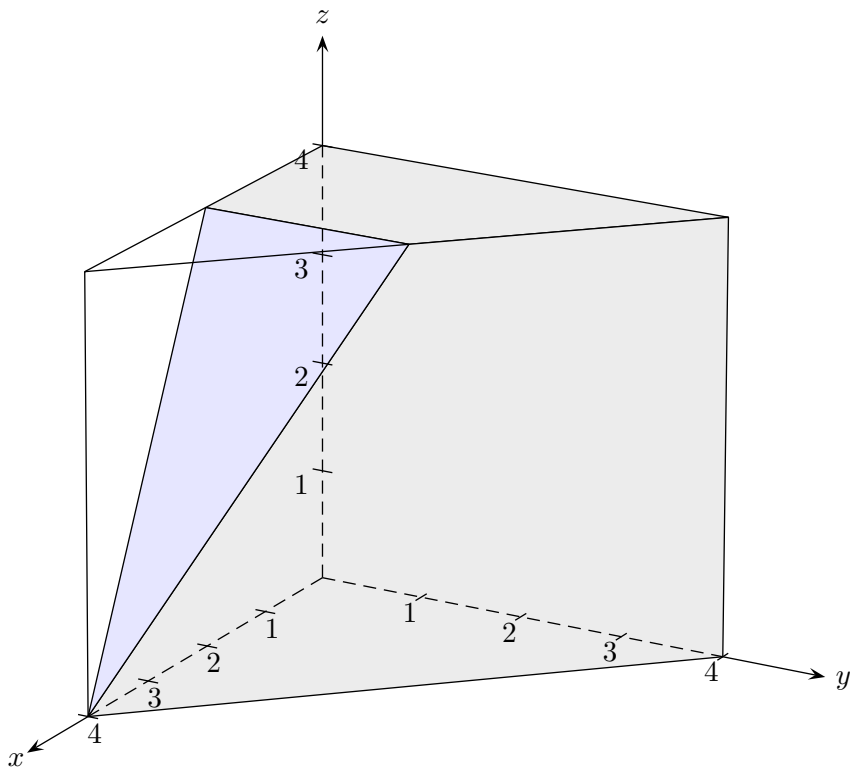
$$S_1(2,67 \mid 1,33 \mid 5,33)$$

$$S_2(2,86 \mid 2,86 \mid 4,57)$$

$$S_3(1,14 \mid 2,86 \mid 4,57)$$

$$S_4(1,3 \mid 1,33 \mid 5,33)$$





Wie lautet die Koordinatenform der Schnittebene?
 (Eine Schnittkante verläuft parallel zu einer Prismakante.)

Schnittebene:

$$2x + z = 8$$