

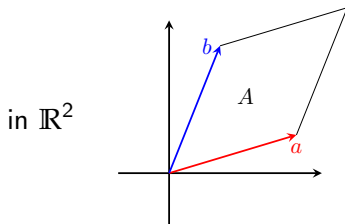
Areas and Volumes

Ex:

$$\begin{aligned} x_1 + 3x_2 &= 0 \\ 2x_1 + 4x_2 &= 6 \end{aligned} \Rightarrow x_1 = \frac{\begin{vmatrix} 0 & 3 \\ 6 & 4 \end{vmatrix}}{\begin{vmatrix} 1 & 3 \\ 2 & 4 \end{vmatrix}} = \frac{-18}{4-6} = 9$$

Areas and Volumes

The results here are easy to state:



$$\text{area } A = \left| \det \begin{bmatrix} | & | \\ a & b \\ | & | \end{bmatrix} \right|$$