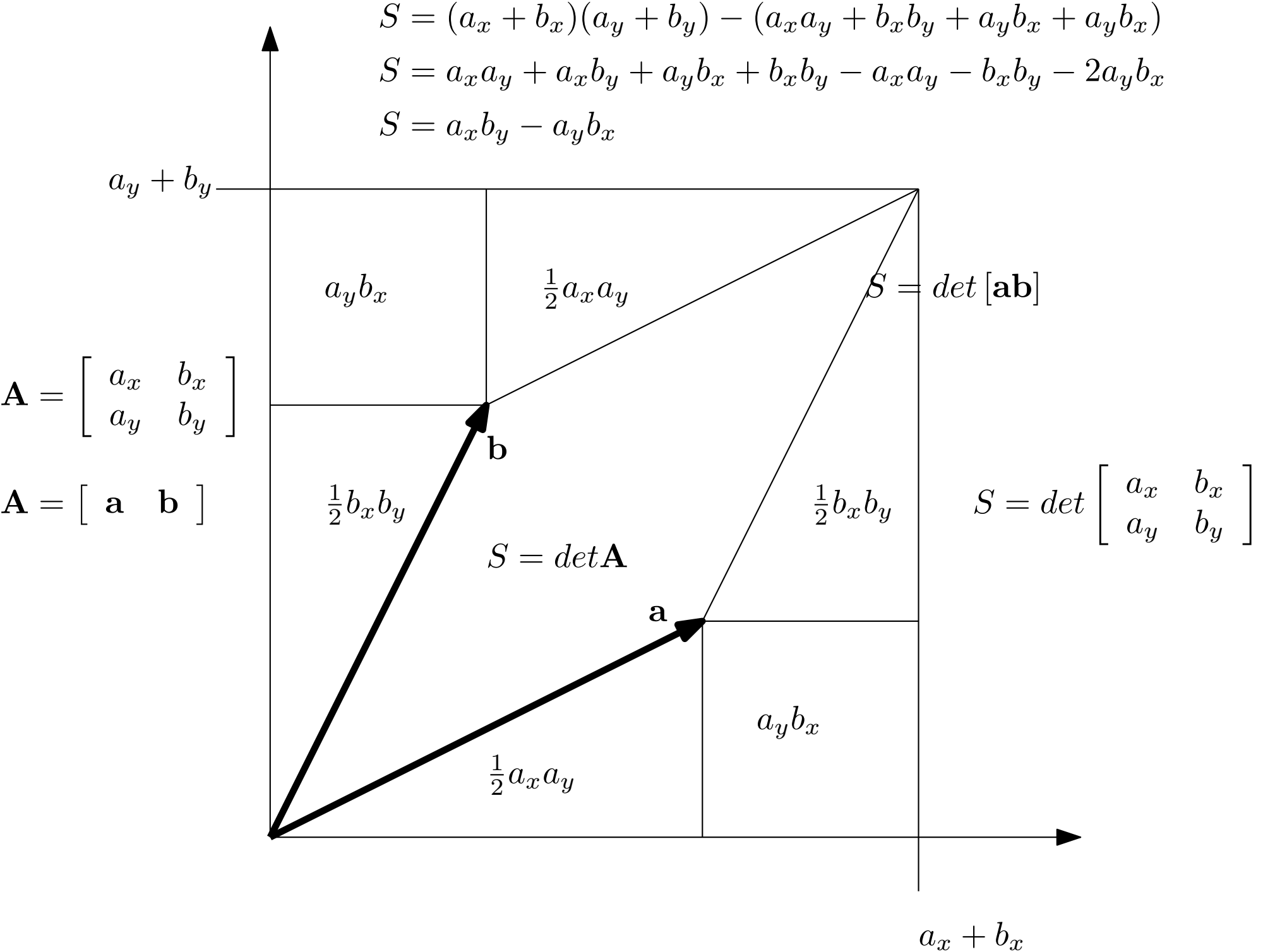
$S = (a_x + b_x)(a_y + b_y) - (a_x a_y + b_x b_y + a_y b_x + a_y b_x)$
$S = a_x a_y + a_x b_y + a_y b_x + b_x b_y - a_x a_y - b_x b_y - 2a_y b_x$
$S = a_x b_y - a_y b_x$
$a_y + b_y$
$a_y b_x$
$\frac{1}{2} a_x a_y$
$S = det\,[\mathbf{ab}]$
$\mathbf{A} = \begin{bmatrix} a_x & b_x \\ a_y & b_y \end{bmatrix}$
$\mathbf{A} = \begin{bmatrix} \mathbf{a} & \mathbf{b} \end{bmatrix}$
$\mathbf{b}$
$\frac{1}{2} b_x b_y$
$\frac{1}{2} b_x b_y$
$S = det \begin{bmatrix} a_x & b_x \\ a_y & b_y \end{bmatrix}$
$S = det\mathbf{A}$
$\mathbf{a}$
$a_y b_x$
$\frac{1}{2} a_x a_y$
$a_x + b_x$