

Determinant av matris av ordning 3.
Utveckling längs kolonn 1.

$$\begin{aligned}\det \mathbf{A} = & (-1)^{1+1}a_{11} \begin{vmatrix} a_{22} & a_{23} \\ a_{32} & a_{33} \end{vmatrix} + \\ & + (-1)^{2+1}a_{21} \begin{vmatrix} a_{12} & a_{13} \\ a_{32} & a_{33} \end{vmatrix} + \\ & + (-1)^{3+1}a_{31} \begin{vmatrix} a_{12} & a_{13} \\ a_{22} & a_{23} \end{vmatrix}\end{aligned}$$

Man kan också beräkna determinanten
med Sarrus´regel:

$$\begin{aligned}\det \mathbf{A} = & \begin{vmatrix} a_{11} & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \\ a_{31} & a_{32} & a_{33} \end{vmatrix} \begin{vmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \\ a_{31} & a_{32} \end{vmatrix} = \\ & a_{11}a_{22}a_{33} - a_{11}a_{23}a_{32} + \\ & a_{12}a_{23}a_{31} - a_{12}a_{21}a_{33} + \\ & a_{13}a_{21}a_{32} - a_{13}a_{22}a_{31}\end{aligned}$$