



**Definition**

Given a square matrix  $A \in \mathbf{R}^{n \times n}$ , a real number  $m \in \mathbf{R}$  is a *minor* of  $A$  if

$$m = \det A_{I,J}$$

for some  $I \subset \{1, \dots, n\}$  and  $J \subset \{1, \dots, m\}$ . The number  $a$  is a *principal minor* if  $I = J$ . It is called the  $(i, j)$  *minor* if it is

$$\det A_{I-\{i\}, J-\{j\}}.$$



