

$$\begin{vmatrix} \frac{\partial x}{\partial u} & \frac{\partial x}{\partial v} & \frac{\partial x}{\partial w} \\ \frac{\partial y}{\partial u} & \frac{\partial y}{\partial v} & \frac{\partial y}{\partial w} \\ \frac{\partial z}{\partial u} & \frac{\partial z}{\partial v} & \frac{\partial z}{\partial w} \end{vmatrix} = \begin{vmatrix} 2 & 3 & 2w \\ -1 & 2 & 0 \\ 0 & 1 & 3 \end{vmatrix} .$$

At the point $(u, v, w) = (1, 1, 0)$ this equals

$$\begin{vmatrix} 2 & 3 & 0 \\ -1 & 2 & 0 \\ 0 & 1 & 3 \end{vmatrix} \\ = 2 \begin{vmatrix} 2 & 0 \\ 1 & 3 \end{vmatrix} - 3 \begin{vmatrix} -1 & 0 \\ 0 & 3 \end{vmatrix} + 0 \cdot \begin{vmatrix} -1 & 2 \\ 0 & 1 \end{vmatrix} \\ = 2[(2)(3) - (0)(1)] - 3[(-1)(3) - (0)(0)] + 0((-1)(1) - (2)(0)) = 2 \cdot 6 + 9 = 21 \quad .$$