MASO

Uge 8, facitliste.

Opgave 22

$$\begin{aligned} \mathbf{f}\circ\mathbf{g}(u,v) &= (3u+3v-2u^2-2v^2+4uv, u^2+v^2+2uv+5u-5v) \\ (\mathbf{f}\circ\mathbf{g})'(1,1) &= \begin{pmatrix} 3 & 3 \\ 9 & -1 \end{pmatrix} \end{aligned}$$

Opgave 23

$$\begin{aligned} \mathbf{f}\circ\mathbf{g}(t) &= t^4+2t^3 \\ (\mathbf{f}\circ\mathbf{g})'(t) &= 4t^3+6t^2 \end{aligned}$$

Opgave 24

$$\mathbf{f}'(1,-2) = \begin{pmatrix} -12 & -24 \\ 12 & -8 \end{pmatrix}$$

.

Opgave S 5.2.1 Hvis

$$\mathbf{f}(x_1,x_2) = (x_1 - x_1x_2,\ x_1x_2) \quad \text{for} \quad x_1 \neq 0\,,$$

er

$$\mathbf{f}^{-1}(y_1,y_2) = (y_1+y_2,\ \frac{y_2}{y_1+y_2}) \quad \text{for} \quad y_1 \neq y_2\,.$$