

Original-Problem	\leftrightarrow	Octave/Scilab-Notation
x	\leftrightarrow	x_1
y	\leftrightarrow	x_2
$F_1(x,y) = \frac{10}{x+y} - 1 - \sqrt{10-x-y}$	\leftrightarrow	$y_1 = \frac{10}{x_1+x_2} - 1 - \sqrt{10-x_1-x_2}$
$F_2(x,y) = \frac{10}{x+y} - \frac{10}{5+x-y}$	\leftrightarrow	$y_2 = \frac{10}{x_1+x_2} - \frac{10}{5+x_1-x_2}$
$\mathbf{J} = \begin{pmatrix} \frac{d}{dx}F_1(x,y) & \frac{d}{dy}F_1(x,y) \\ \frac{d}{dx}F_2(x,y) & \frac{d}{dy}F_2(x,y) \end{pmatrix}$	\leftrightarrow	$JMF = \begin{pmatrix} \frac{dy_1}{dx_1} & \frac{dy_1}{dx_2} \\ \frac{dy_2}{dx_1} & \frac{dy_2}{dx_2} \end{pmatrix}$
$\frac{dF_1(x,y)}{dx} = \frac{1}{2\sqrt{10-x-y}} - \frac{10}{(x+y)^2}$	\leftrightarrow	$\frac{dy_1}{dx_1} = \frac{1}{2\sqrt{10-x_1-x_2}} - \frac{10}{(x_1+x_2)^2}$
$\frac{dF_1(x,y)}{dy} = \frac{1}{2\sqrt{10-x-y}} - \frac{10}{(x+y)^2}$	\leftrightarrow	$\frac{dy_1}{dx_2} = \frac{1}{2\sqrt{10-x_1-x_2}} - \frac{10}{(x_1+x_2)^2}$
$\frac{dF_2(x,y)}{dx} = \frac{10}{(5+x-y)^2} - \frac{10}{(x+y)^2}$	\leftrightarrow	$\frac{dy_2}{dx_1} = \frac{10}{(5+x_1-x_2)^2} - \frac{10}{(x_1+x_2)^2}$
$\frac{dF_2(x,y)}{dy} = -\frac{10}{(x+y)^2} - \frac{10}{(5+x-y)^2}$	\leftrightarrow	$\frac{dy_2}{dx_2} = -\frac{10}{(x_1+x_2)^2} - \frac{10}{(5+x_1-x_2)^2}$