

Exercise 1, Handwritten Exercises

Dominik Autaler, Jonas Otto

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1

1.1 Aufgabe 2.1

Given the image $I = \begin{pmatrix} 0 & 0 & 1 & 1 & 1 \\ 0 & \textcolor{red}{0} & \textcolor{red}{1} & \textcolor{red}{0} & 0 \\ 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 1 & 1 & 0 \end{pmatrix}$ and the filter $G_x = \begin{pmatrix} -1 & 0 & 1 \\ -1 & \textcolor{green}{0} & 1 \\ -1 & 0 & 1 \end{pmatrix}$ the values of the three marked pixels are (from left to right) 2, 1 and -1.

1.2 Aufgabe 2.2

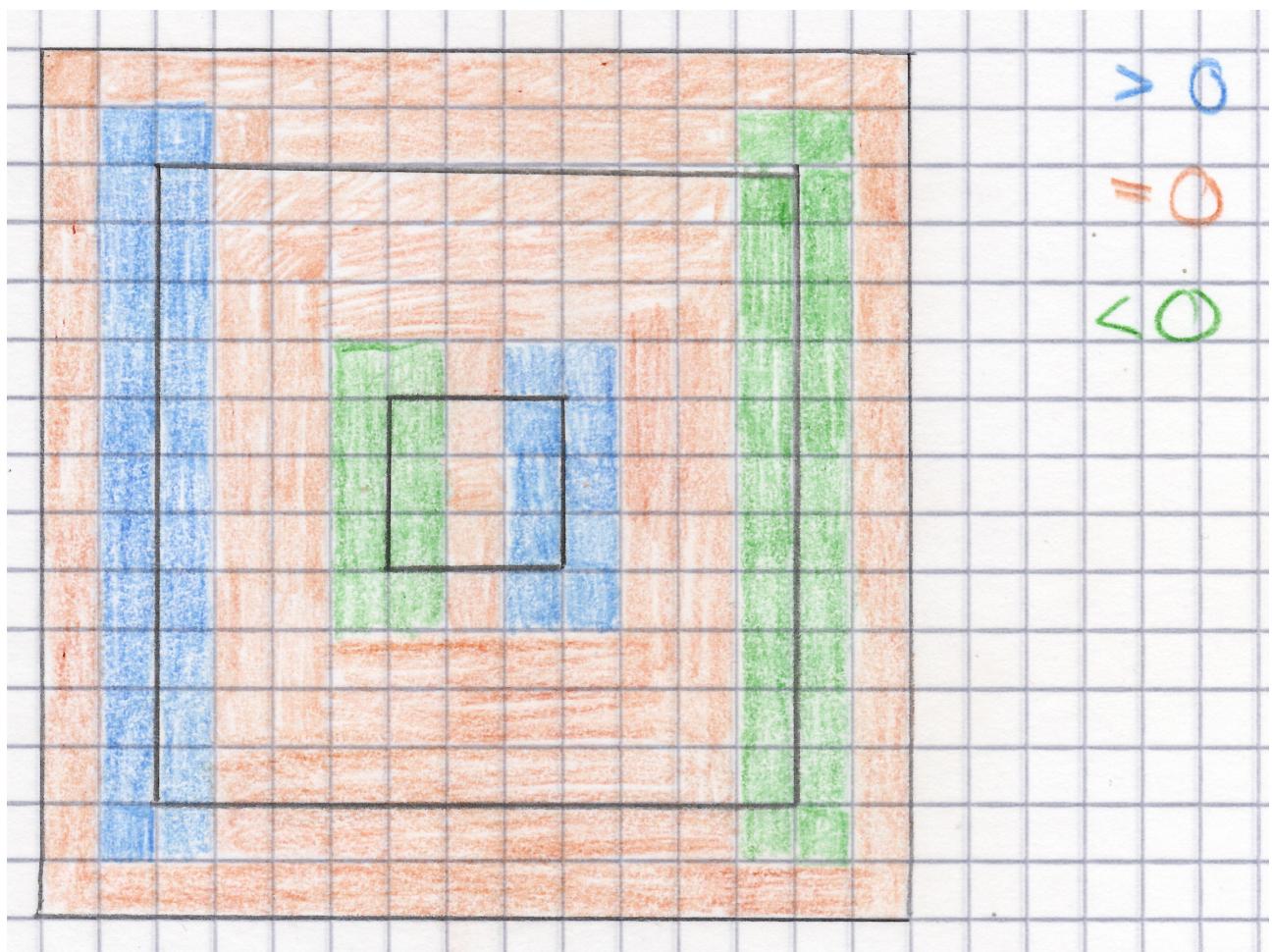


Abbildung 1: Response type of G_x applied to the Figure

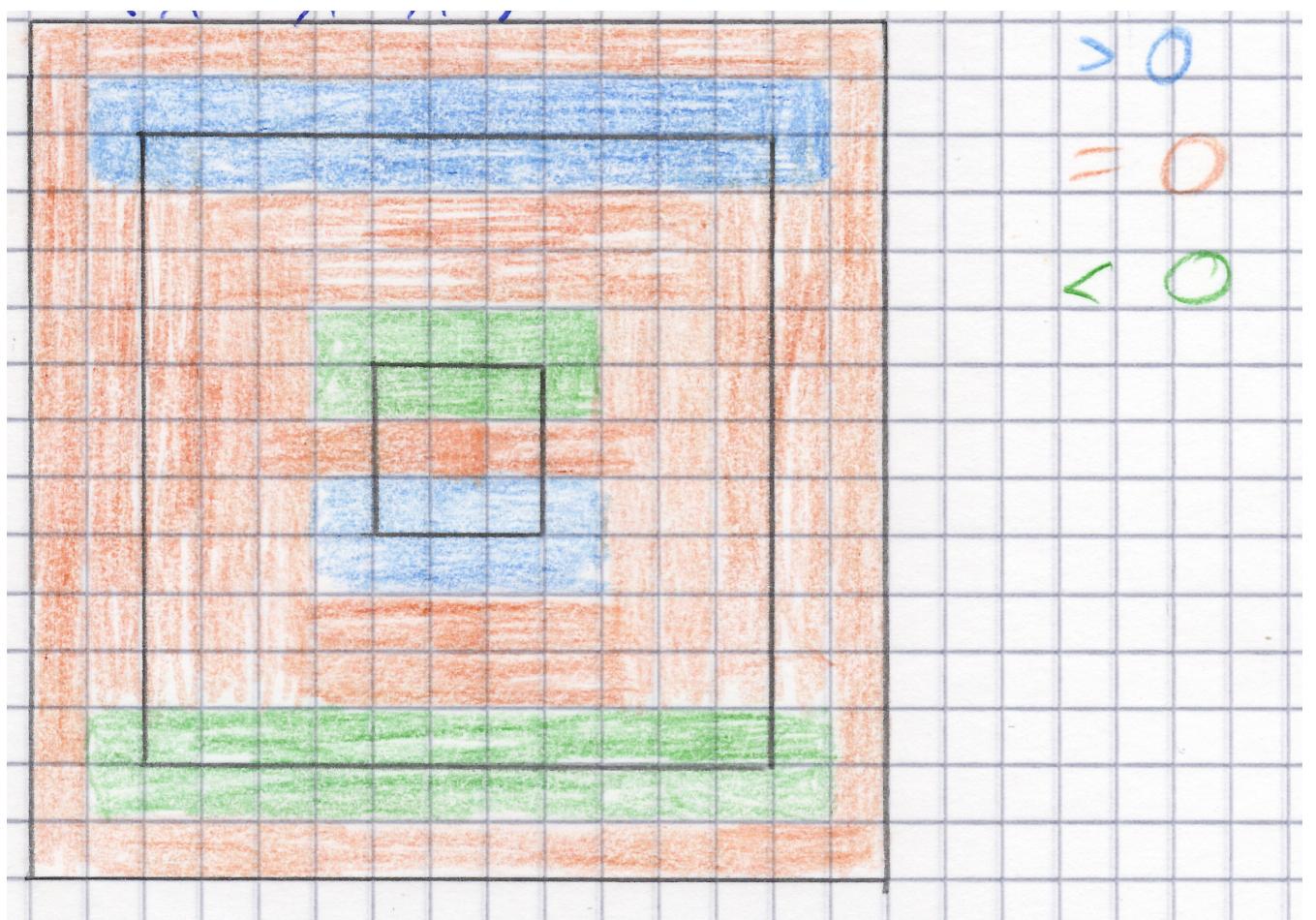


Abbildung 2: Response type of G_y applied to the Figure