

\Rightarrow pro matici $A = (a_1, a_2) = (0, 0)$ platí
 rovnice \otimes pro $h_1, h_2 \neq 0$

Pro $h_1 = 0$ je to splněno triviálně

\Rightarrow hledáme G -derivace k matici $A = (0, 0)$

formy G -derivace

reálné. Hledáme matici $A = (a_1, a_2)$ takovou, aby
 platilo

$$\otimes \text{ pro } \begin{cases} h_1 \neq 0 \\ h_2 \neq 0 \end{cases} \quad \left(\begin{array}{cc|c} 2ah_2 & \frac{2}{h_1} & -4(0,0) - a_1h_1 - a_2h_2 \\ h_1^2 h_2^2 + 2 & -\frac{2}{h_1^2} h_1^2 & \end{array} \right) = 0$$

$$\forall h_1, h_2 \quad h_1 \neq 0 \quad \quad \quad -4(0,0) = 0$$

$$\text{pro } h_2 = 0 \Rightarrow a_2 = 0$$

Necht' $h_1, h_2 \neq 0$ položíme $z = \frac{h_2}{h_1}$

$$\text{pro } \begin{cases} h_1 \neq 0 \\ h_2 \neq 0 \end{cases} \quad \left(\begin{array}{cc|c} 2ah_2 & \frac{2}{h_1} & -4(0,0) - a_1h_1 - a_2h_2 \\ h_1^2 h_2^2 + 2 & -\frac{2}{h_1^2} h_1^2 & \end{array} \right) = 0$$

$$\Rightarrow \text{pro } \begin{cases} h_1 \neq 0 \\ h_2 \neq 0 \end{cases} \quad \left(\begin{array}{cc|c} 2ah_2 & \frac{2}{h_1} & -4(0,0) - a_1h_1 - a_2h_2 \\ h_1^2 h_2^2 + 2 & -\frac{2}{h_1^2} h_1^2 & \end{array} \right) = 0$$

$$= \left(\frac{h_2}{h_1} \right)^2 \frac{1}{2} \quad \left| \quad \right.$$

$$\Rightarrow \text{pro } \begin{cases} h_1 \neq 0 \\ h_2 \neq 0 \end{cases} \quad \left(\begin{array}{cc|c} 2ah_2 & \frac{2}{h_1} & -4(0,0) - a_1h_1 - a_2h_2 \\ h_1^2 h_2^2 + 2 & -\frac{2}{h_1^2} h_1^2 & \end{array} \right) = 0$$

$$= 0 \quad \left(\frac{h_2}{h_1} \right)^2 = 0 \quad \quad \quad = 0$$