

ALA BLATTNR. 10 03.07.2014

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1.

$$f(x, y, z) = 2x^2 + y^2 + 4z^2 - 2yx - 2x - 6y + 8$$

$$f_x = 4x - 2 \quad f_{xx} = 4$$

$$f_y = 2y - 2z - 6 \quad f_{yy} = 2$$

$$f_z = 8z - 2y \quad f_{zz} = 8$$

$$f_{xy} = 0 \quad f_{yx} = 0$$

$$f_{xz} = 0 \quad f_{zx} = 0$$

$$f_{yz} = -2 \quad f_{zy} = -2$$

TODO

Hesse Matrix:

$$A = \begin{pmatrix} 4 & 0 & 0 \\ 0 & 2 & -2 \\ 0 & 0 & 8 \end{pmatrix}$$

2.

3.

4.