Dear students!

In the problem 3b) of the coursework the vector field ${\bf B}$ should be

$$\mathbf{B} = b\partial_x - a\partial_y + a\partial_z - b\partial_t,$$

instead

$$\mathbf{B} = b\partial_x - a\partial_y - a\partial_z + b\partial_t,$$

as it is written in the text of the coursework

Please, excuse me for this erratum.

I am grateful to Pouya Adrom who noticed this.

H.M.K.