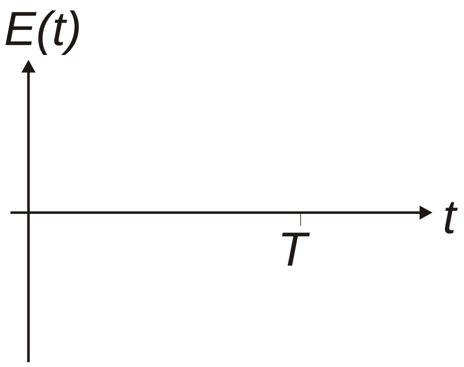
Exercise 11	**Diffraction and polarization of light**		*Theory:*
Team:	Name:		*Experiment:*
Date:	Weeks day and hour:	Major, group:	*Remarks*

Diffraction

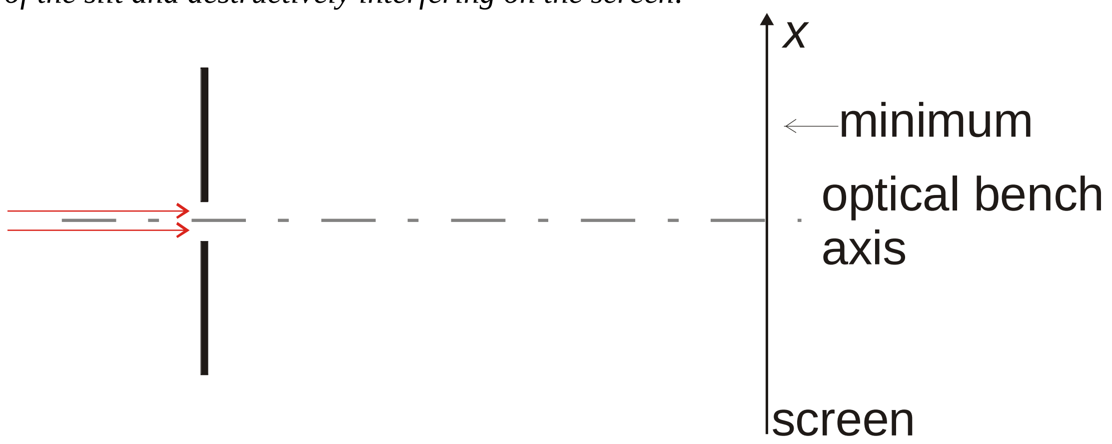
Equation of running wave:

....



On the graph on the side draw two waves, which in a given point in space undergo destructive interference

Fill in the Figure below (view from a top) with an example of the light rays bent at the edges of the slit and destructively interfering on the screen:



In the figure above mark the distance between the slit and the screen, the average angle of deflection of light θ.

Formula for calculation of the approximate $\sin(\theta)$, *assuming that the location of the minimum of x, the order of that minimum and the distance between the slit and the screen or the detector is known:*

....

Equation for calculation of the width of the slit on the basis of above formula and the equation (1) from the manual :

....

Table 1. I(x) measurements
Position of central maximum:……………..

x	*I*	***x***	*I*	***x***	*I*

Table 2. Interference minima and the slit width

Minima position							
Order of minimum *n*							
Calculated slit width							

Mean value of the slit width and its uncertainty: .... +/- .... [ ]

Polarization

Malus law:...

Table 3. I(α) measurements

α	*I*	α	*I*