

G10TINPOS

Positive Lens

Focal length f is positive, light from left propagating from medium with index 1 to lens of refractive index n .

x_o on left of surface (negative)

Calculation of graph for x_i as function of x_o over the total range of x_o .

graph for x_i as function of x_o over the range of x_o to the left of f .

graph for x_i as function of x_o over the range of x_o to the right of f

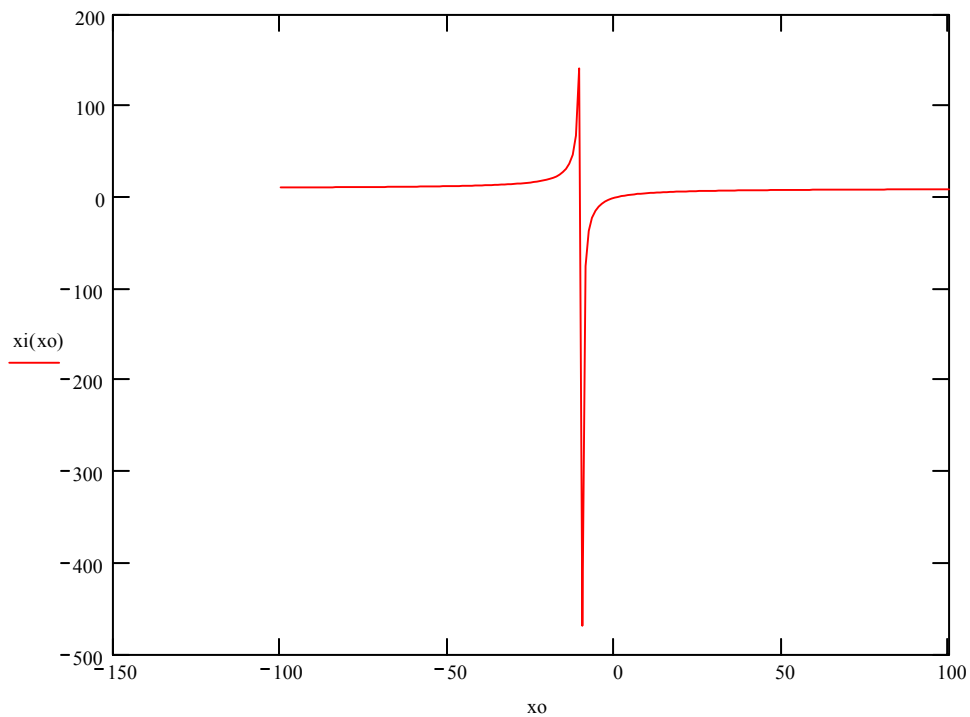
$$f \equiv 10$$

Image focus: f

Object focus: $-f$

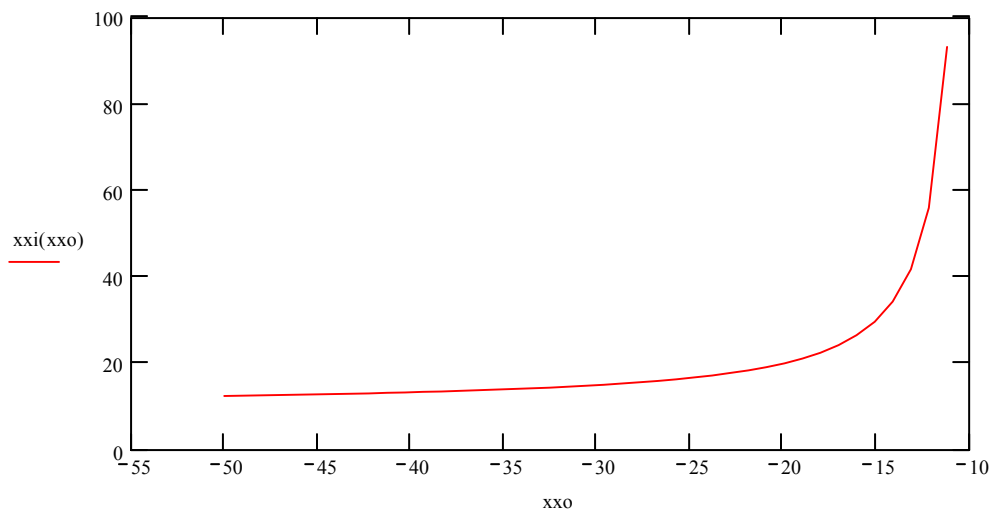
$$x_o := -100.001, -99.031 \dots 100$$

$$x_i(x_o) := \frac{1}{\left(\frac{1}{f}\right) + \frac{1}{x_o}}$$



$$\text{xxo} := -50.001, -49.031 \dots -11$$

$$\text{xxi}(\text{xxo}) := \frac{1}{\left(\frac{1}{f}\right) + \frac{1}{\text{xxo}}}$$



$$\text{xxxo} := -9.001, -8.031 \dots 50$$

$$\text{xxxi}(\text{xxxo}) := \frac{1}{\left(\frac{1}{f}\right) + \frac{1}{\text{xxxo}}}$$

