

## Home task 3

Construct a cemented achromatic doublet of focal length -100 mm. (Please note this lens is negative!) Make one of the lenses planoconvex or planoconcave. Use the glasses BK7 ( $n=1.51679$ ,  $V=64.17$ ) and SF5 ( $n=1.67269$ ,  $V=32.22$ ). Assuming thin lenses, find the radii of curvature of all surfaces. Sketch the lens.

Please note this task can be solved in more than one way!