8) (18 points) In a Young's double slit experiment, a pair of slits is encased in a rectangular block of glass (n=1.52), and glass block is surrounded by air, as shown below. The glass block is illuminated by coherent light (λ = 660 nm) from a laser, as shown. The beam enters the block at normal incidence, propagates through the glass and strikes the slit-pair, which are separated by W = 1×10^{-6}m. The wavelets emerging from the slit undergo interference, as usual. (a) At most, how many bright fringes can be formed on eitherside of the bright fringe, and what are the angles associated with these bright fringes? Sketch the situation. (b) How many primary beams emerge from the glass block on the side of the observer, and what are the angles at which they emerge?