Sample calculations for lab 10

(1) Choose a (physically valid) index of refraction. Calculate the angle at which the transmitted ray will be at right angles to the reflected ray.

(2) Choose a focal length for a concave mirror. Choose a real object position. Characterize the resulting image giving the image position and the magnification.

(3) Choose a focal length for convex mirror. Choose a real object position. Characterize the resulting image giving the image position and the magnification.

(4) What will be the critical angle for total internal reflection for a material with an index of refraction of 1.6?