## Homework 0

Due Wednesday 11 January

1. A small butterfly rests 0.50 m (i.e. the object distance $s_{\mathrm{o}}$ ) in front of a positive lens with focal length $f=0.30 \mathrm{~m}$. An image is formed on a screen. (a) Find the lens to screen distance (i.e. the image distance $s_{i}$ ) for a focused image. (b) Find the magnification of the butterfly's image on the screen. (c) Draw a ray diagram using the three principal rays.
