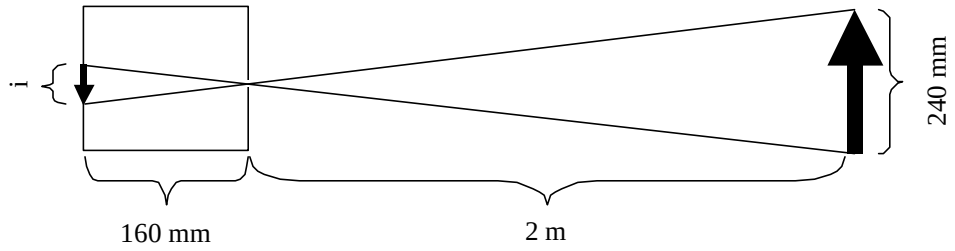
The arrow on the window

According to the ray theory of light, a black paper arrow pasted on a window should make an upside down image inside a pinhole camera, situated as illustrated below, where i stands for the height of the image on the screen inside the camera:



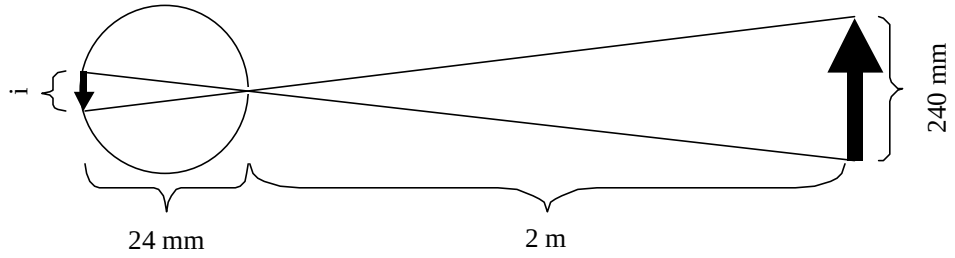
Since the two triangles are made by the intersection of two straight lines, they are similar triangles. Therefore, they should be scale models of each other, and the following should be true:

$$\frac{i}{160mm} = \frac{240mm}{2m}$$

Converting all measurements to the same units and isolating the i lets us calculate the size of the image as follows:

$$i = \frac{240mm}{2m} \times \frac{1m}{1000mm} \times 160mm = 19.2mm$$

If I stand so that the pupil of my eye is where the pinhole was before, I can calculate the size of the image on my retina.



$$i = \frac{240mm}{2m} \times \frac{1m}{1000mm} \times 24mm \cong 2.9mm$$

The paper arrow, viewed from a distance of 2 meters makes an image not quite 3 mm tall on my retina!