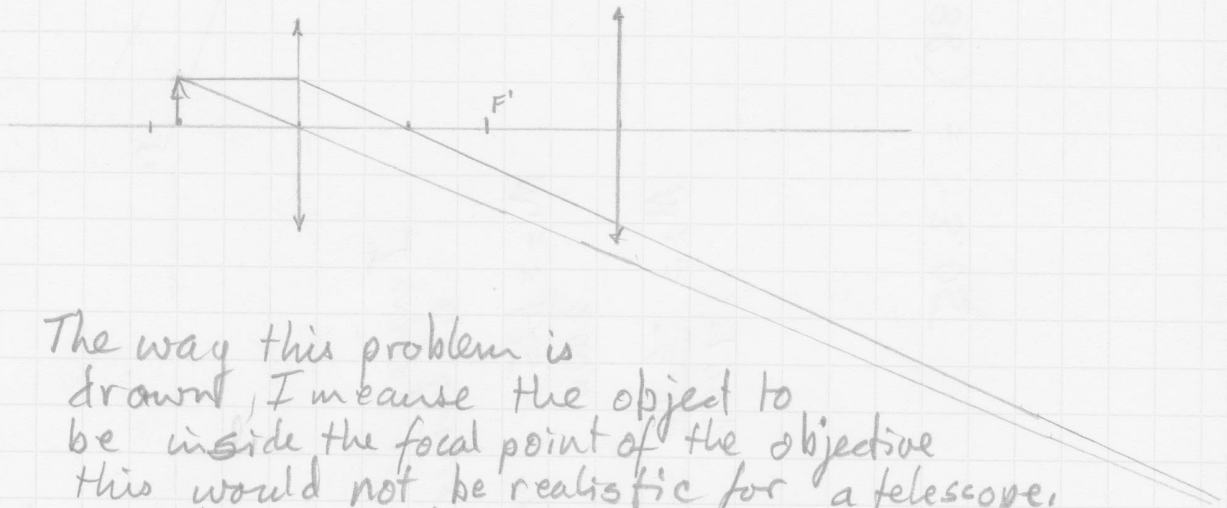


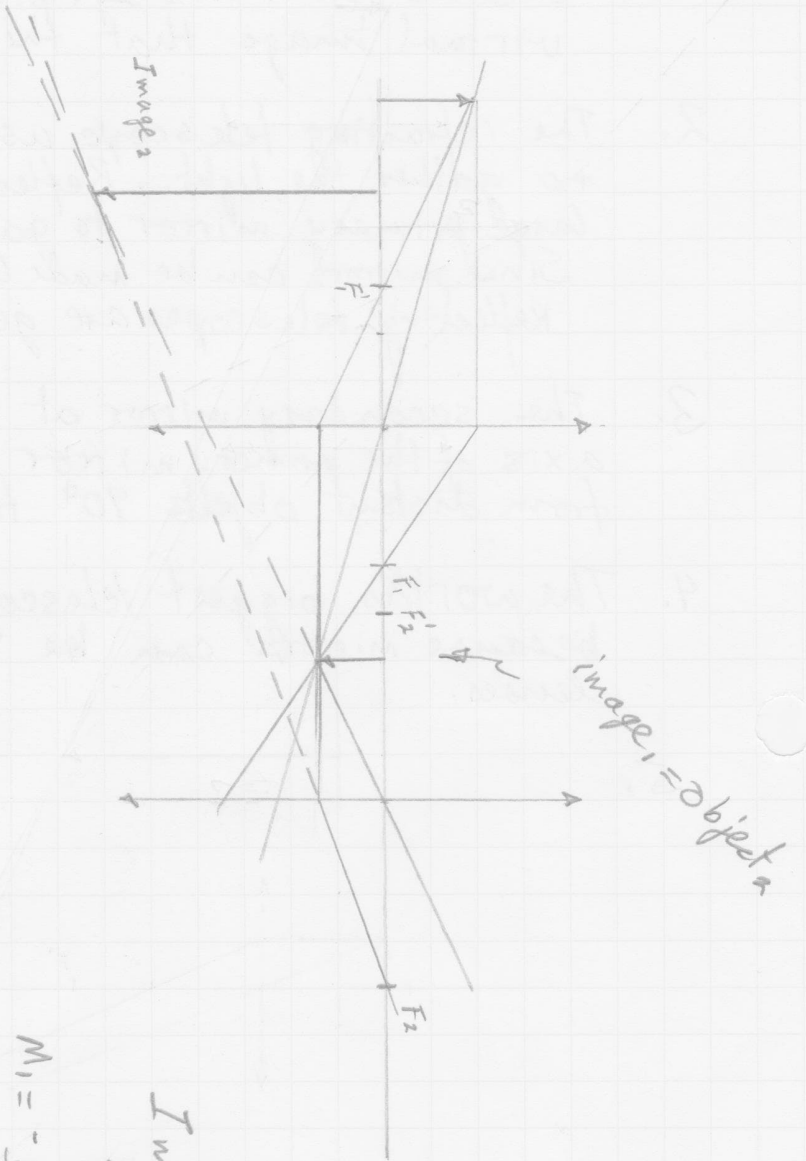
1. Two converging lenses, the objective & eyepiece, concentrate & focus light from distant objects. The objective creates a real image between the two lenses which becomes the object for the second lens. The eyepiece then forms a larger virtual image that the eye sees.
2. The refracting telescope uses a large lens, (objective) to gather the light. Reflecting telescopes use a large primary mirror to gather light. Since mirrors can be made larger than lenses, reflecting telescopes are generally more sensitive.
3. The secondary mirror at 45° to the principle axis of the primary mirror diverts the light from distant objects 90° to the eye piece.
4. The worlds biggest telescopes are reflecting, because mirrors can be made larger than lenses.

5.



The way this problem is drawn, I mean the object to be inside the focal point of the objective this would not be realistic for a telescope. I will redraw it using more reasonable distances.

5.



$b =$ length of block
on this paper
 $= \frac{1}{2}$ inch,

Image 2 is virtual
& larger

$$M_1 = \frac{-1.25 \text{ b}}{2.00 \text{ b}} = -0.625$$

$$M_2 = \frac{-6.1 \text{ b}}{-1.25 \text{ b}} = 4.9$$

$$M = \frac{-6.1 \text{ b}}{2.0 \text{ b}} = -3.05$$

or $M = M_1 \cdot M_2 = (-0.625)(4.88) = -3.05$

$$M = -3.05$$