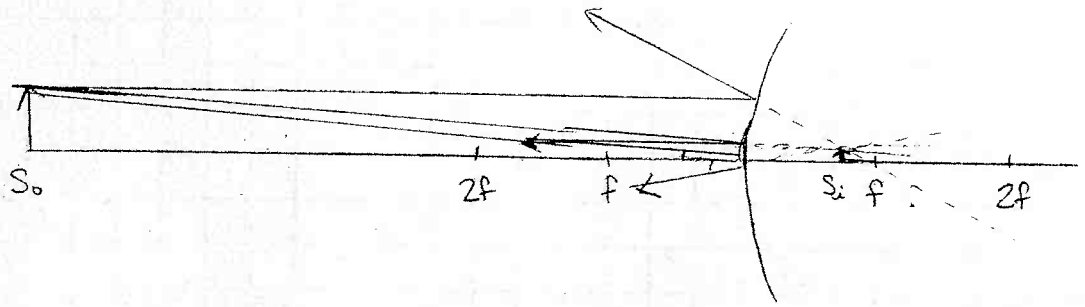
P #6

Ch 23- pg 742

$d = 6.00\,cm$ so $R = 3.00\,cm$

$f = \frac{R}{2} = \frac{3.00\,cm}{2}$

$f = -1.50\,cm$ (Convex mirror)
$s_o = 10.0\,cm$



Find s_i: $\frac{1}{s_o} + \frac{1}{s_i} = \frac{1}{f}$

$\frac{1}{10} + \frac{1}{s_i} = \frac{1}{-1.5}$

$s_i^{-1} = (-1.5)^{-1} - 10^{-1}$

$s_i = -1.3\,cm$

Find M: $M = -\frac{s_i}{s_o}$

$= \frac{-(-1.3cm)}{10.0cm}$

$\boxed{M = +.13}$