The Curved Mirror Equation

$$\frac{1}{f} = \frac{1}{d_o} + \frac{1}{d_i}$$

Magnification equations: $\qquad M = \dfrac{-d_i}{d_o} \qquad\qquad M = \dfrac{h_i}{h_o}$

Negative numbers:

A negative value for **f** means that it is a **diverging (convex) mirror**.

A negative value for d_i means that the image is **virtual**.

A negative value for h_i (caused by a negative M) means that the image is **inverted**.

Example:

a) A trucker looks in the convex side mirror and sees the image of their face. If the focal length of the mirror is 50 cm and their face is 75 cm away from the mirror, calculate the image distance.

Given: *Substitution:*

Required:

Analysis: *Solution:*

b) What is the magnification, attitude, and type of the image in the side mirror?