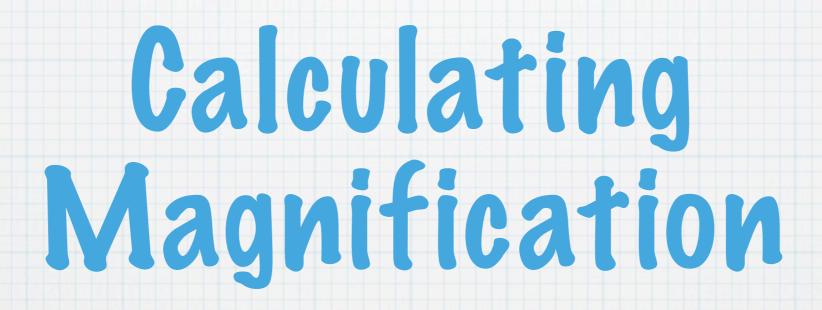
Mirror Equations

The Mirror Equation of Magnification

- * f= focal length
 - * Positive in a concave mirror, Negative in a convex mirror
- * do = distance of object
 - * Always positive (always in front of mirror)
- * di = distance of image
 - * Positive if the image is real
 - * Negative if the image is virtual

* Petermine the image distance for a 10.0 cm tall object placed 60 cm from a concave mirror having a focal length of 20.0 cm.

* A convex mirror has a focal length of -12.3 cm. An object is placed 56.8 cm from the mirror's surface. Determine the image distance.



- * Magnification: The measure of how much larger or smaller an image is compared to an object.
 - * Expressed as a ratio and has no units.
 - * Two measurements within the equation has to be the same units.

Magnification = <u>image height</u> object height

$$M = h^i$$
 h^0

Magnification = -image distance object distance

$$M = -d^i$$
 d^0

- * If magnification is greater than 1, the image is larger than the object
- * If magnification is smaller than 1, the image is smaller than the object.
- * A negative magnification means the image is inverted and real.
- * A positive magnification means the image is upright and virtual

* Petermine the height of the image for a 10.0 cm tall object placed 60 cm from a concave mirror having a focal length of 20.0 cm.