**NOTES 5.2: Using Mirrors to form images**

Plane mirrors – ray diagram

You must find the image of the ball by following these steps:

1. Draw a normal line where the two incident rays strike the mirror
2. Measure the angle of incidence for the two rays
3. Using the law of reflection draw two reflected rays
4. Extend the reflected rays behind the mirror using dotted lines.
5. Draw the image where the two rays meet

Object mirror

Discussion

1. Measure the object distance (distance from mirror to object) and record
2. Measure the image distance (distance from image to mirror) and record your value
3. How did the image distance compare to the object distance?

Concave mirrors

* A concave mirror is a mirror that curves inward
* Parallel light rays that strike a concave mirror come together and meet at a single point called the focal point
* Rays that come together are called converging rays
* Concave mirrors obey the law of reflection
* Ray diagrams can be used to determine the size and orientation of the image



Convex Mirrors

* Convex mirrors are mirrors that curve outward
* Parallel light rays that strike a convex mirror spread apart
* Rays that spread apart are called diverging rays



* Images formed by convex mirrors are always smaller and upright
* More objects can be seen in a convex mirror than in a plane mirror of the same size
* Common uses: security mirrors, car side-view mirrors