

Name _____
Physics _____ Period ____

CONCAVE/CONVEX LENSES

- I. Draw a ray diagram for each lens. Ray diagrams should be drawn to scale. Use a ruler.
- draw a ray **parallel** to the center line to the lens THEN through **F**
- draw a ray through **F** to the lens THEN **parallel** to the center line
- draw a ray through **center** of lens
- II. Lens equation: Measure the object distance (d_o) and focal length (f). Using the lens equation, solve for the image distance (d_i). Using the magnification equation, solve for the magnification of the image. Next, *measure* the image distance and image height.
Do your mathematical answers match the ray diagram?

CONVEX (CONVERGING) LENS

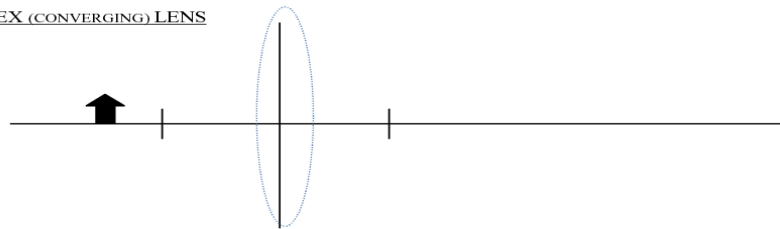


Image distance

Magnification

Based on Magnification

Ray Diagram

Image should be:

Image is:

VIRTUAL / REAL

UPRIGHT / INVERTED

SMALLER / BIGGER

CONCAVE (DIVERGING) LENS

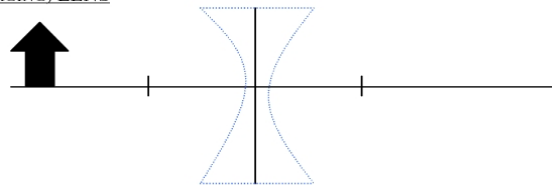


Image distance

Magnification

Based on Magnification

Ray Diagram

Image should be:

Image is:

VIRTUAL / REAL

UPRIGHT / INVERTED

SMALLER / BIGGER