

Lenses: Converging and Diverging.

You will be trying to determine what factors affect whether a lens is a diverging or converging lens.

1. Open the **VRefraction** program.
2. Go to options and select use 5 slits.
3. Click and drag the flashlight so the flashlight is on the principle axis of the lens. Adjust where the light hits the lens so the light rays are coming in parallel to the principle axis.
4. Adjust the slit separation to the largest value.
5. Adjust the properties of the shape of the lens on the left and right side and develop some rules that will make the lens a Converging lens. Make some notes as you adjust the values.
6. Where the rays cross is called the focal point.
 - a. What makes the focal point very close to the lens?
 - b. Far away from the lens?
7. Repeat the procedure for making a diverging lens. What conditions make a diverging lens?
8. A diverging lens also has a focal point. How can you find where the focal point is for a diverging lens?
9. Adjust the index of refraction for both the “air” and the “glass” to see how that affects the type of lens.
10. What conditions must there be for the light rays to go out parallel?
11. Summarize what you have found. Include some neat sketches to help describe your finding.