Note Taking Guide - Lenses

Total Internal Reflection –
*Draw the reflected angles as you watch the video.*

![Diagram of total internal reflection](image)

- **critical angle**
- **total internal reflection**

When "i > \(i_c\)" no light ________________.

**Problem Set #1:**

**Convex lens**
- ...
- ...

**Concave lens**
- ...
- ...

**Parts of a lens:**
- **object side of lens**
Go to the Lens Lab now.

Convex Lens Ray Diagrams:

<table>
<thead>
<tr>
<th>in to lens from object</th>
<th>out from lens</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

2F'  F'  F  2F

Problem Set #2: Teachers will issue a copy of this.

Concave Lenses:

<table>
<thead>
<tr>
<th>in to lens from object</th>
<th>out from lens</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

F'  2F' 2F
The image formed is __________, __________, and __________.

Problem Set #3:

A concave lens acts very much like a ________ mirror, producing __________, __________, and __________ image. For lenses as well as mirrors, virtual images are always __________ whereas real images are always __________.

Take notes on uses for lenses: