

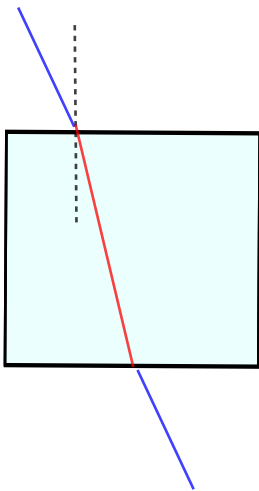
**Plane Mirrors**

There are two important angles for each of the rays of light. They are:

The perpendicular lines are used to:

Is this image real or virtual? Why:

What is the magnification?



**Refraction**

There are two important angles for each of the rays of light. They are:

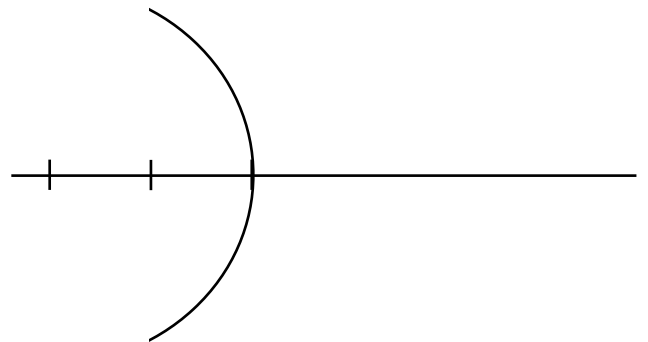
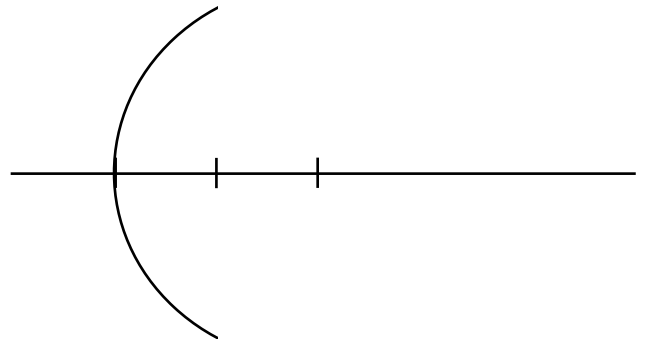
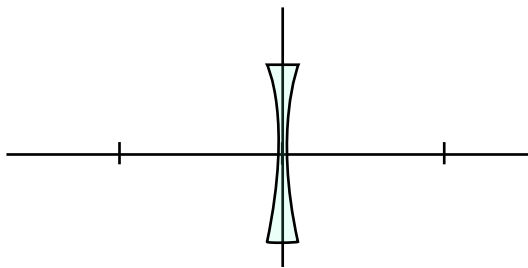
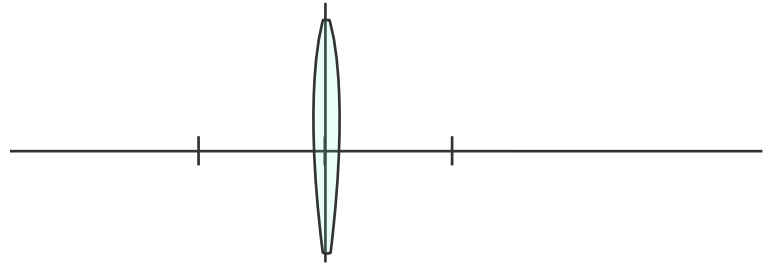
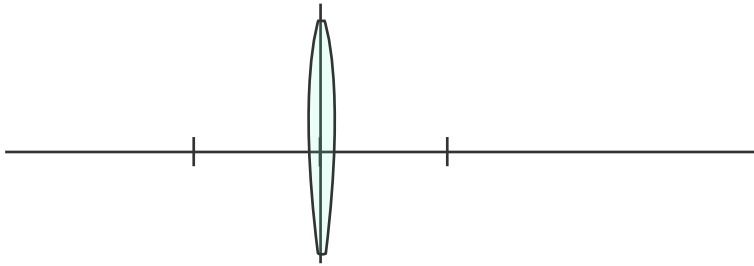
The perpendicular lines are used to:

What does the index of refraction (n) define?

What is a critical angle?

$$n = \frac{c}{v}$$

$$n_i \sin \theta_i = n_r \sin \theta_r$$



**Ray Diagrams:**

What lines should you draw for every diagram?

- 1
- 2
- 3

When are images real?

Which of the lenses/mirrors usually converge the rays of light?

Which of them always diverge the rays?

**Solving By Equations:**

When should things be negative?

Focal length  
Magnification  
height  
distance

$$f = \frac{r}{2}$$

$$M = \frac{h_i}{h_o}$$

$$M = -\frac{d_i}{d_o}$$

$$\frac{1}{f} = \frac{1}{d_o} + \frac{1}{d_i}$$