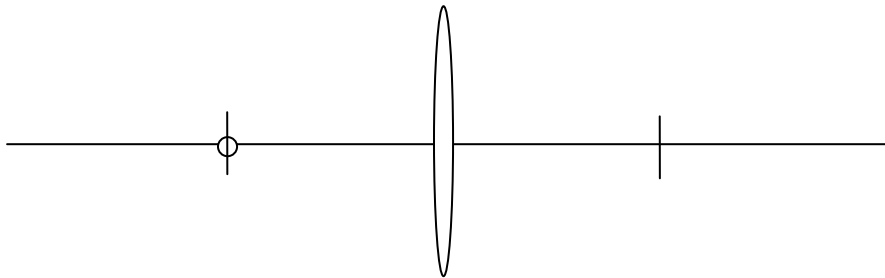
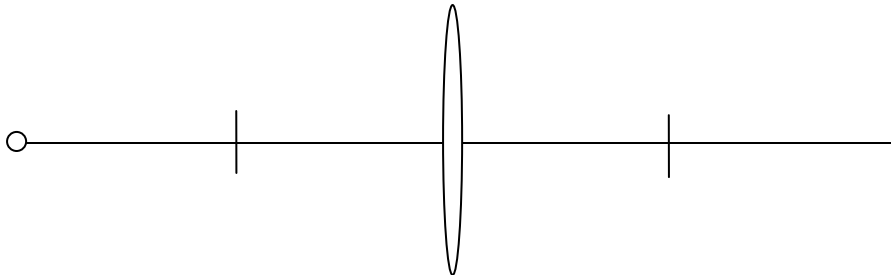


Wavefronts are a surface of constant phase. In particular this means that all points on the wavefront are a **FIXED TIME** from the source. If you have a point source, what would the wavefronts look like?

Now imagine a point source one focal length away from a converging lens. Sketch the wavefronts from the source to the lens, and then leaving the lens.

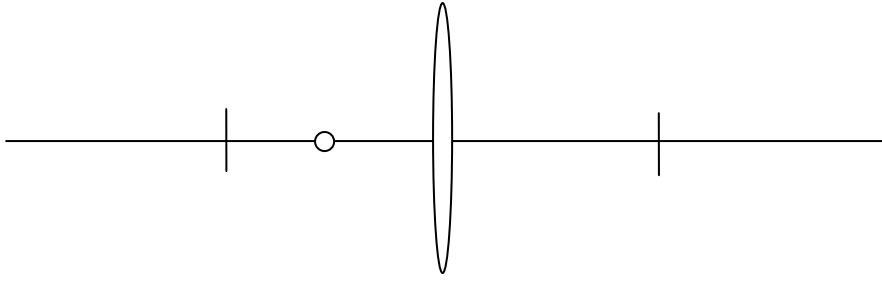


Now imagine that the point source is two focal lengths from the lens. Sketch the wavefronts from the source, through the lens, to the image and past the image. Describe the wavefronts, their curvature and the impact of the lens on the point source wavefronts.



Imagine that you had your eye at the location of the image or closer to the lens, what would the rays be doing before they entered your eye?

Imagine a converging lens with a point source less than one focal length from the lens. Sketch the rays in this case. Describe the wavefronts, their curvature and the impact of the lens on the point source wavefronts.



Imagine that you have a diverging lens and a point source. Sketch the wavefronts from this situation, their curvature and the impact of the lens on the point source's wavefronts.

Generalize these results.