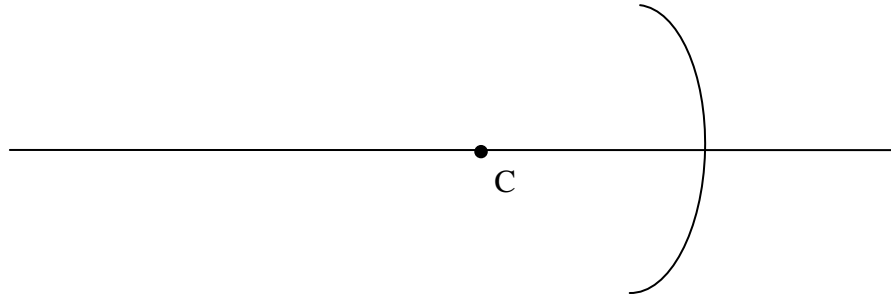
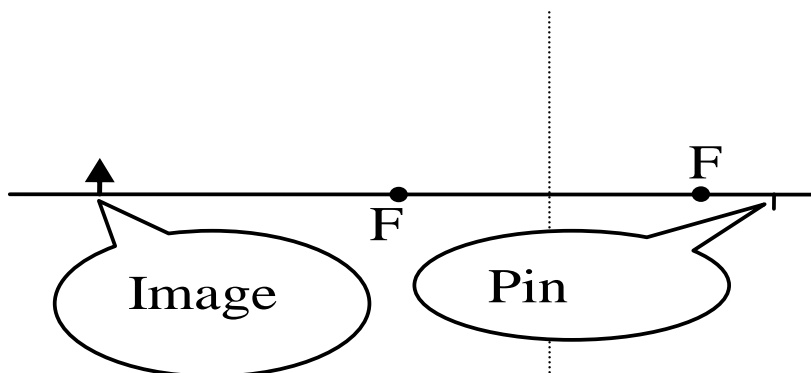


1. A spherical concave mirror is shown below. The center of the curvature is C. An **UPRIGHT** image is found. Please give out the details how you reached your solution of following questions.



- (a) Determine the location of the focus.
- (b) Which side of the mirror does the image locate?
- (c) Which side of the focal point does the image locate?
- (d) Is the image enlarged or diminished?
- (e) Using the ray tracing to show the location of the object.

2. A pin locates on the right side of an unknown optical device, which could be either a mirror or a lens. The optical device locates at the position marked by the dotted line. The focus of this device locates could located at one or both of the two locations marked as F. An **inversed** image is found on the left side as shown in the drawing.



- (a) What is this device?
- (b) Trace necessary rays on the graph to show how the image is formed.