## Images in Curved Mirrors - 11.9

Discover the 'rules'

1. Set up the concave mirror on your lined sheet of paper so that it is perpendicular to the lines on your paper. One line on your paper should run through the middle of the lens and we will trace that one. It is the 'principal axis' or P.A.
2. Aim 5 parallel rays of light at the lens as shown in diagram below.
3. All 5 rays should reflect and intersect at a common point. Mark this ' $f$ ' for focal point.

The dot that is shown is ' C ' for Centre. This is where the centre of the sphere is.


Rules:
Now use just one ray!
\#1 - Aim one ray parallel to the P.A. Draw/sketch what the reflected ray does.

\#2 Aim one ray through the focal point, ' $f$ '. Draw/sketch what the reflected ray does.

\#3 Where the P.A. hits the mirror, label this 'V' for vertex. Aim a single ray at the vertex. Draw/sketch what the reflected ray does.

\#4 - Try to figure out where the centre of the circle is. Label this ' $C$ '. Aim a single ray through ' $C$ '. Draw/sketch what the reflected ray does.

