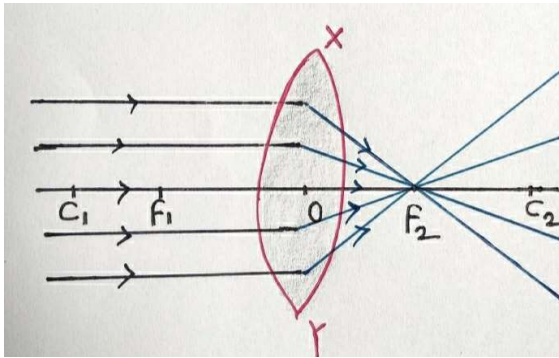


Let us discuss how images are formed, their nature and location in case of convex lens using ray diagrams:

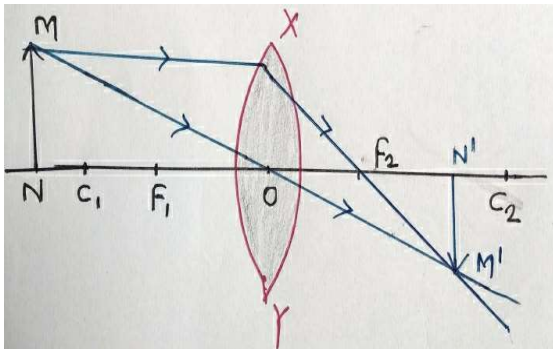


Position of object: At infinity

Position of the image: At focus F_2

Size of the image: Highly diminished & point sized

Nature of image: Real & inverted

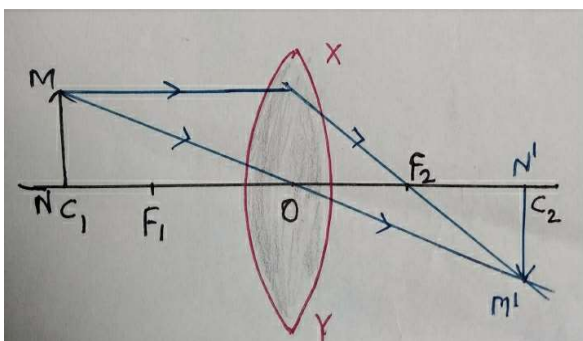


Position of object: Beyond C_1 ($2F_1$)

Position of the image: Between F_2 and C_2 ($2F_2$)

Size of the image: Diminished

Nature of image: Real & inverted

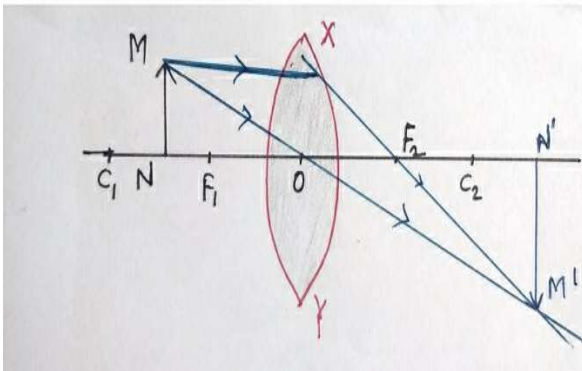


Position of object: At C_1 ($2F_1$)

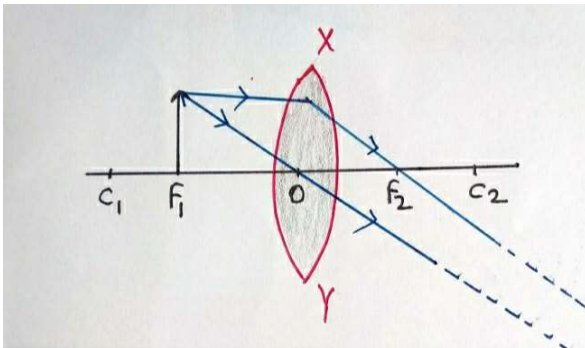
Position of the image: At C_2 ($2F_2$)

Size of the image: Same size

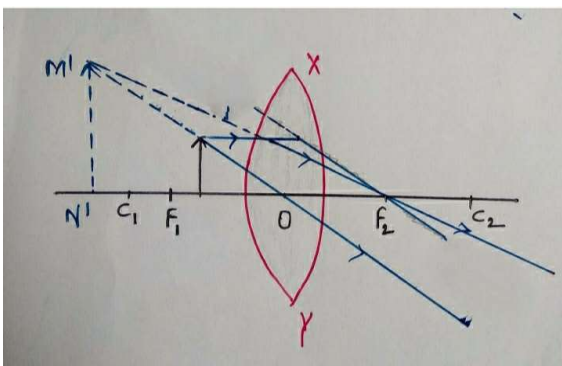
Nature of image: Real & inverted



- Position of object: Between F_1 and C_1 ($2F_1$)
- Position of the image: Beyond C_2 ($2F_2$)
- Size of the image: Enlarged
- Nature of image: Real & inverted



- Position of object: At F_1
- Position of the image: At infinity
- Size of the image: Highly enlarged
- Nature of image: Real & inverted



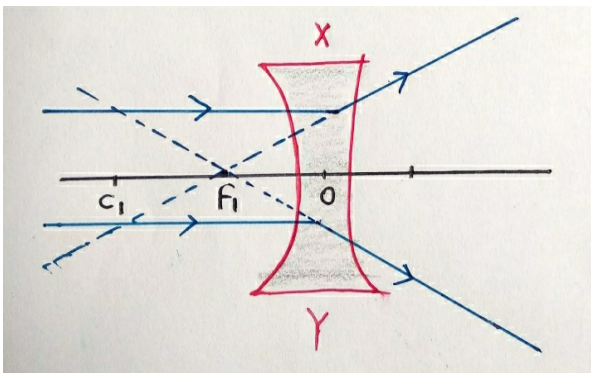
Position of object: Between F_1 & optical center O

Position of the image: on the same side of the lens as the object

Size of the image: Enlarged

Nature of image: Virtual and erect

Let us discuss how images are formed, their nature and location in case of concave lens using ray diagrams:

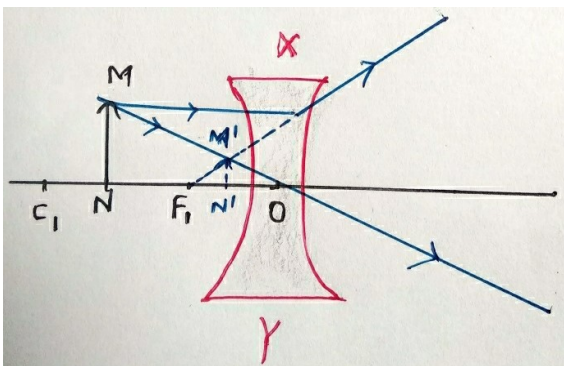


Position of object: At infinity

Position of the image: At F_1

Size of the image: Highly diminished & point sized

Nature of image: Virtual & erect



Position of object: Between infinity & optical center O

Position of the image: Between F_1 & O

Size of the image: Diminished

Nature of image: Virtual & erect