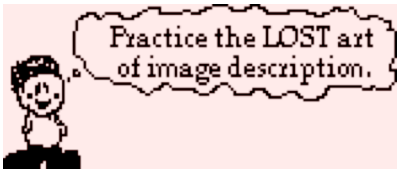
Ray Diagrams for Concave Mirrors

Read from **Lesson 3** of the **Reflection chapter** at **The Physics Classroom:**

http://www.physicsclassroom.com/Class/refln/u13l3d.html
http://www.physicsclassroom.com/Class/refln/u13l3e.html

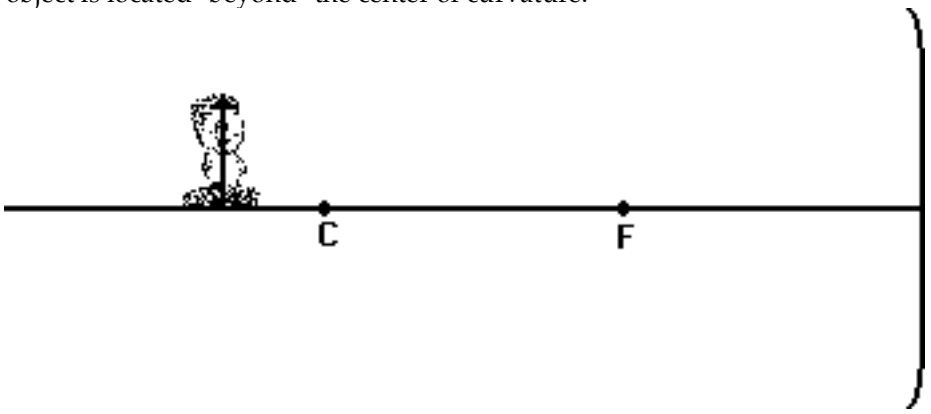
MOP Connection: Reflection and Mirrors: sublevels 5 and 6

For the following mirrors and corresponding object positions, construct ray diagrams. Then describe the **L**ocation of the image, **O**rientation (upright or inverted) of the image, the relative **S**ize of the image (larger or smaller than object), and the **T**ype of image (real or virtual). For **Case 4**, merely construct the ray diagram.



NOTE: 1) All light rays have arrowheads that indicate the direction of travel of the ray.
2) Always draw in the image once located (an arrow is a good representation).
3) Exactness counts. Use a straightedge and be accurate.

Case 1: If the object is located "beyond" the center of curvature.

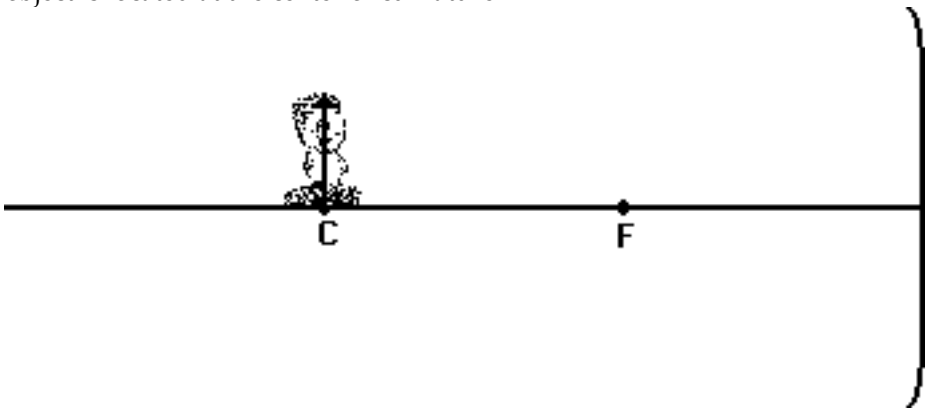


Description of Image:

Location: _____

O: Upright or Inverted **S**: Magnified or Reduced **T**: Real or Virtual

Case 2: If the object is located at the center of curvature.

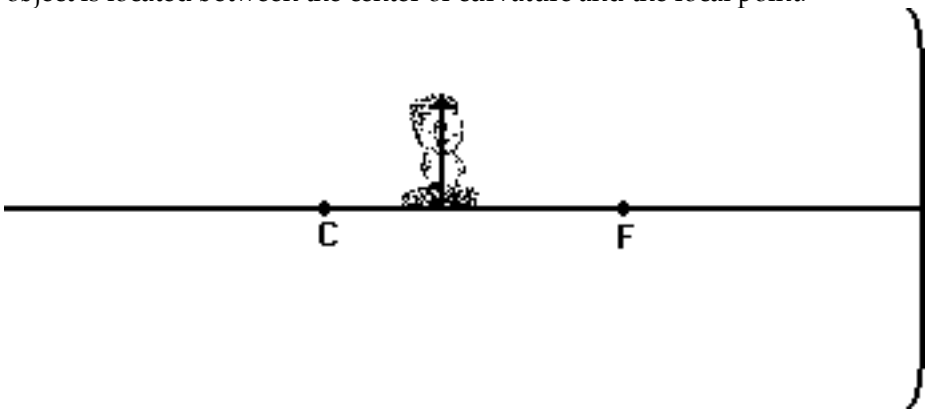


Description of Image:

Location: _____

O: Upright or Inverted **S**: Magnified or Reduced **T**: Real or Virtual

Case 3: If the object is located between the center of curvature and the focal point.

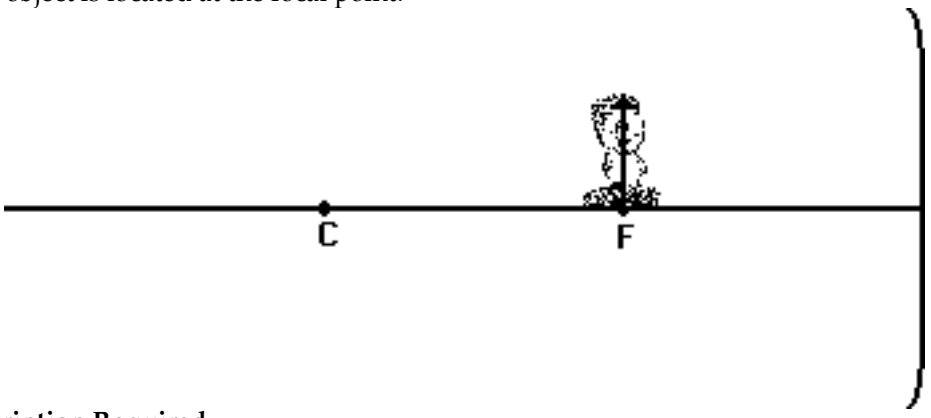


Description of Image:

Location: _____

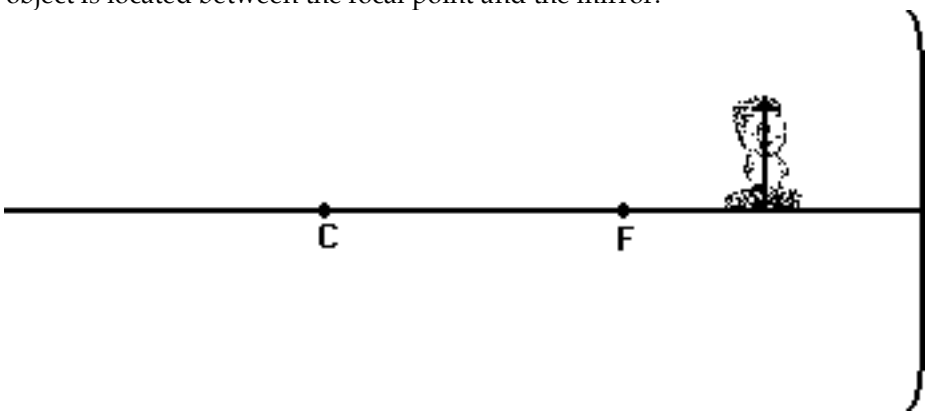
O: Upright or Inverted **S**: Magnified or Reduced **T**: Real or Virtual

Case 4: If the object is located at the focal point.



No Description Required

Case 5: If the object is located between the focal point and the mirror.



Description of Image:

Location: _____

O: Upright or Inverted **S**: Magnified or Reduced **T**: Real or Virtual

