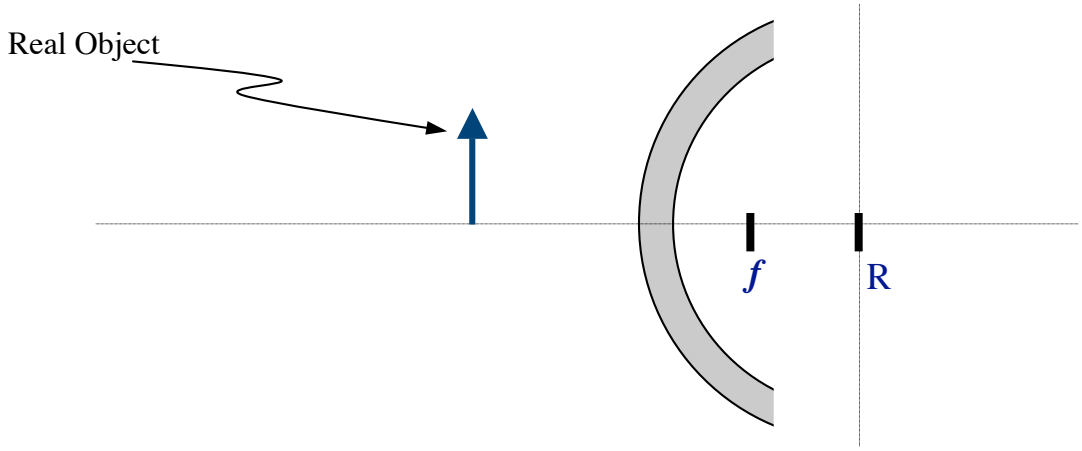
Name _____

Ray Tracing – Circular Mirrors

1. NOTE: The focal length of a mirror is one half the radius of curvature.
2. Draw axial ray through mirror. (The dotted line going through the mirror)
3. Draw a ray from (top of) object along radial line of mirror (through R) which is normal (perpendicular) to the mirror surface. This ray reflects back along its path.
4. Draw a ray from (top of) object to axial ray. When the ray reaches the mirror it reflects with an equal but opposite angle. You can make sure these angles are equal if the ray passes below the object at the same height as the object.
5. Draw a ray from (top of) object through focal point (*f*). When the ray reaches the mirror plane it will reflect so that the ray becomes parallel to the axis.

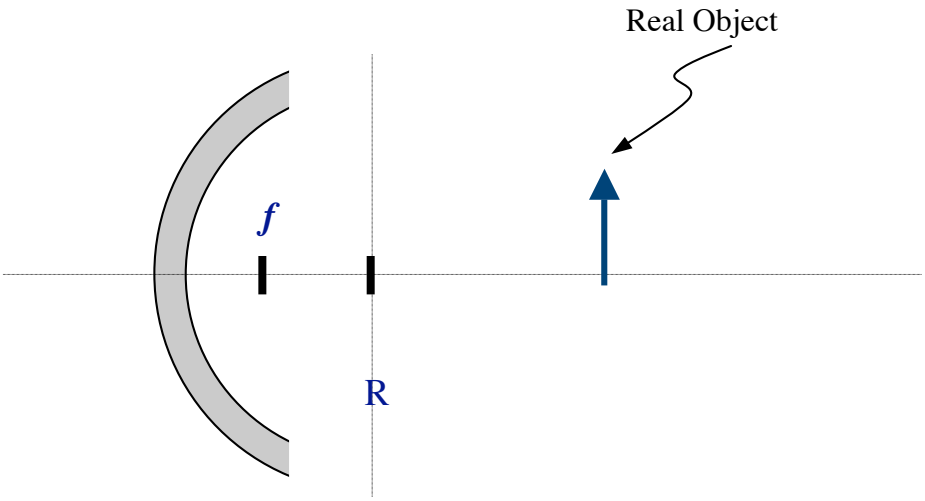
Find where the rays either intersect (real object) or appear to all come from (virtual object). This point defines the (top of) the image. NOTE: For a mirror the image must be on the same side of mirror as the object for the image to be real.

Circular Mirror – Convex



Name _____

Circular Mirror – Concave {object far away}



Circular Mirror – Concave {object inside focal point}