

1. Label the diagram of a **Concave Mirror** to the right.
2. Complete each incomplete sentence and draw the characteristic ray it describes.

|  |  |
| --- | --- |
| **Concave Mirror Characteristic Rays** | |
| **Parabolic Characteristics:** | |
| Any incident ray parallel to the principal axis will |  |
| Any incident ray passing through the Focus will |  |
| **Circular Characteristics:** | |
| Any incident ray striking the Vertex will |  |
| Any incident ray passing through the Centre of Curvature will |  |

NOTE: Any ray originating on the object, and reflecting off the mirror, will pass through a corresponding point on the image. Characteristic rays simply help predict Image Characteristics.

1. Complete the following ray diagrams and state the image characteristics.

|  |  |  |
| --- | --- | --- |
| Object Location | Images Formed by Concave Mirrors  Ray Diagrams | Image Characteristics |
| **Beyond C** |  | **Size**  **Inversion**  **Location**  **Type** |
| **At C** |  | **Size**    **Inversion**    **Location**    **Type** |
| **Between**  **F and C** |  | **Size**    **Inversion**    **Location**    **Type** |
| **At F** |  | **Size**  **Inversion**  **Location**  **Type**    **Uses** |
| **Between F and V** |  | **Size**    **Inversion**    **Location**    **Type** |
| **FAR beyond**  **C** |  | **Size**    **Inversion**    **Location**    **Type** |

1. If the OBJECT IS MOVED far beyond the Centre of Curvature, the image will move

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1. If the OBJECT IS MOVED close toward the focus, the image will move

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1. In order to produce a VIRTUAL IMAGE with CONCAVE MIRROR, an object must be placed

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1. In order to produce a REAL IMAGE with CONCAVE MIRROR, an object must be placed

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1. In order to produce an UPRIGHT IMAGE with CONCAVE MIRROR, an object must be placed

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1. In order to produce the LARGEST IMAGE POSSIBLE with CONCAVE MIRROR, an object must

be placed \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.