PHYS 202 Image formation by lenses Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **The lens/mirror equation, magnification, and lens power are given by:**

** **            

1. Sketch a concave lens and its principal axis. Using rays that are parallel to the principal axis, show the focal point and focal length, and identify the sign for the focal length.

2. An object is placed 15 cm in front of a concave lens of focal length of 25 cm.

(a) Determine the image distance.

(b) Determine the magnification of the image.

(c) Describe three properties of the image.

(real/virtual, magnified/reduced, upright/inverted)

(d) Draw a ray diagram to illustrate the formation of the image.

PHYS 202 Image formation by lenses Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **The lens/mirror equation, magnification, and lens power are given by:**

** **            

1. Sketch a convex lens and its principal axis. Using rays that are parallel to the principal axis, show the focal point and focal length, and identify the sign for the focal length.

2. An object is placed 6.0 cm in front of a convex lens of focal length of 9.0 cm.

(a) Determine the image distance.

(b) Determine the magnification of the image.

(c) Describe three properties of the image.

(real/virtual, magnified/reduced, upright/inverted)

(d) Draw a ray diagram to illustrate the formation of the image.