Light 3

1. Which side of a lens is real?
    Why?

2. Which side of a mirror is real?
    Why?

3. Draw the lenses with the light rays I showed in class
    Convex _   Concave:

4. Draw the mirrors with the light rays I showed in class
    Convex _   Concave:

5. What is a real image?

6. What is a virtual image?

7. Why can we see a virtual image?

8. Explain divergent and convergent.

9. Which devices have real focal points?

10. Which devices have virtual focal points?

11. What is a focus (or focal point)?

12. Real or virtual?

    A. ____ The focal point of a divergent device.
    B. ____ The object of a concave mirror.
    C. ____ The image is inverted.
    D. ____ The image on the left side of a mirror.
    E. ____ The focal point of a concave mirror.
    F. ____ The focal point of a convergent device.

    G. _____ The image on the right side of a mirror.
    H. _____ The image on the left side of a lens.
    I. _____The image on the right side of a lens.
    J. _____The image is upright.
    K. _____You can see the image on a piece of paper.
    L. _____The object for a convergent device.

13. Positive or negative.

    A. _____For the object.
    B. _____For a real image.
    C. _____The focal point for convergent devices.
    D. _____The image of a convex mirror.
    E. _____The focal point for a concave lens.
    F. _____The focal point for a convex lens.

    G. ____ If the image is on the left side of a mirror.
    H. ____ If the image is on the right side of a lens.
    I. ____ The focal point for a concave mirror.
    J. ____ The focal point for divergent device.
    K. ____ The image is on the right side of a mirror.
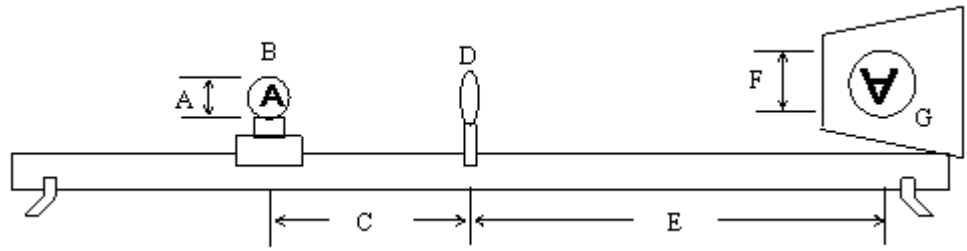   L. ____ The distance to the image if it is inverted.

(Refer to your notes)

14. Using the diagram:
    A) What letter is h?
    B) What letter is p?
    C) What letter is q?
    D) What letter is h'?
    E) Which letter represents
       the object?
    F) Which letter is the image?
    G) Real or virtual image?
    H) What kind of device is it?

    I) Starting the top and bottom of the object to the image, draw the light rays.
    J) Label the focal point.
    K) Once you have the focal point, label f (which is not the focal point).

15. A 6.2 cm tall object is 4.3 cm away from a convex lens. If the image is 7 cm on the right side of the lens…
    A) Assign variables.

    B) Find the focal length of the lens.

    C) Find the magnification of the lens.

    D) Find the height of the image.