Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date:\_\_\_\_\_\_\_\_\_\_\_\_\_Period:\_\_\_\_\_\_\_\_\_\_

**Ch 14.2 Thin Lenses** Page 501 - Practice Problems B – Lenses

1. An object is placed 20.0 cm in front of a converging lens of focal length 10.0 cm. Find the image distance and the magnification. Describe the image.
2. Sherlock Holmes examines a clue by holding his magnifying glass at arm’s length and 10.0 cm away from an object. The magnifying glass has a focal length of 15.0 cm. Find the image distance and the magnification. Describe the image that he observes.
3. An object is placed 20.0 cm in front of a diverging lens of focal length 10.0 cm. Find the image distance and the magnification. Describe the image.
4. Fill in the missing values in the following table.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | *F* | P | q | M |
| Converging lens |
| a. | 6.0 cm | ? | -3.0 cm | ? |
| b. | 2.9 cm | ? | 7.0 cm | ? |
| Diverging Lens |
| c.  | -6.0 cm | 4.0 cm | ? | ? |
| d.  | ? | 5.0 cm | ? | .50 |