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**Physics**

**Mirror Equation Worksheet**

1. An object is placed 15 cm from a converging (concave) mirror that has a focal length of 10 cm.

a. Determine the image location. (Answer: 30 cm)

b. If the object is 5 cm high, how high is the image? (Answer: -10 cm)

c. Is the image real or virtual? inverted or upright? larger or smaller?

2. A converging (concave) mirror with a focal length of 7 cm is held 4 cm from your face.

a. Determine the image location. (Answer: -9.33 cm)

b. What is the magnification of the image? (Answer: 2.33 cm)

c. Is the image real or virtual? inverted or upright? larger or smaller?

3. A diverging mirror with a focal length of 90 cm is used as a side view mirror on a car. Another car is located 5 m in front of the mirror.

a. Determine the magnification of the image. (Answer: 0.15)

b. Is the image real or virtual? upright or inverted? larger or smaller?

4. A concave mirror is used to produce an inverted image of a light bulb directly

 below the light bulb. The bulb is located 1.2 m from the mirror.

 a) What is the focal length of the mirror? (Answer: 0.6cm)

 b) What is the magnification?

5. How far would an object need to be placed from a mirror of focal length 10.0 cm if it is

image which is 20.0 cm BEHIND the mirror? (Answer: 6.67 cm)

6. A mirror with a focal length of -100.0 cm is used to form an image. An object is placed 50.0cm in front of the mirror. a)Where is the image located? (Answer: -33.3cm)

b) What type of mirror is used in this problem?