## Lens Equation Worksheet

1. Determine the image distance and image height for a $5.5-\mathrm{cm}$ tall object placed $54.0-\mathrm{cm}$ from a converging lens having a focal length of 20.0 cm .
2. Determine the image distance and image height for a $5.0-\mathrm{cm}$ tall object placed $48.0-\mathrm{cm}$ from a converging lens having a focal length of 24.0 cm .
3. Determine the image distance and image height for a $4.8-\mathrm{cm}$ tall object placed $26.0-\mathrm{cm}$ from a converging lens having a focal length of 16.0 cm .
4. Determine the image distance and image height for a $6.8-\mathrm{cm}$ tall object placed $10.0-\mathrm{cm}$ from a converging having a focal length of 14.0 cm .
5. A magnified, inverted image is located a distance of 38.0 cm from a converging lens with a focal length of 10.0 cm . Determine the object distance and tell whether the image is real or virtual.
