

Figure 3.9 Images formed by converging lenses

object O, uses	ray diagram	image I
<p>a) O between F and L</p> <p>i) magnifying glass ii) instrument eyepieces iii) spectacles correction for long-sightedness</p>		<p>i) virtual ii) erect iii) magnified iv) on same side of lens as O and further away</p>
<p>b) O at F</p> <p>produces a parallel beam of light as in a spot light with lamp at O</p>		<p>at infinity</p>
<p>c) O between F and 2F</p> <p>i) projector ii) microscope objective lens</p>		<p>i) real ii) inverted iii) magnified iv) on opposite side of lens to O, beyond 2F</p>
<p>d) O at 2F</p> <p>camera making equal size copies</p>		<p>i) real ii) inverted iii) same size as O iv) on opposite side of lens to O, at 2F symmetrical diagram</p>
<p>e) O beyond 2F</p> <p>i) camera ii) the eye</p>		<p>i) real ii) inverted iii) diminished iv) on opposite side of lens, between F and 2F this is diagram c) reversed</p>
<p>f) O at infinity</p> <p>objective lens of a telescope</p>		<p>i) real ii) inverted iii) diminished iv) on opposite side of lens at F this is diagram b) reversed</p>

Figure 3.10 Image formed by a diverging lens

<p>uses:</p> <p>i) eyepiece in some instruments ii) in spectacles to correct short-sightedness</p>		<p>image I is:</p> <p>i) virtual ii) erect iii) diminished iv) on same side of lens as O, but nearer</p>
--	--	--