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Far point: It is the farthest point at which the objects can be seen distinctly.
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The far point of an eye with healthy vision is at infinity.

• **What is the near and far point of an eye with healthy vision?**

Near point - 25 cm, Far point - infinity

Analysis of table 6.1 (Textbook page - 133)

If the distance from lens to screen is constant,

1. To get clear images of near objects, lens of shorter focal length is to be used.
2. To get clear images of far objects, lens of large focal length is to be used.

This situation can be compared to an eye

- The distance between lens and screen (retina) is constant.
- Hence for clear vision of nearer objects, the focal length is to be decreased.
- For far objects, the focal length of lens is to be increased.

■ **How does a crystalline lens increase and decrease its focal length?**

- As the curvature of lens increases, focal length decreases.
- As the curvature of lens decreases, focal length increases.

■ **How does the eye lens change its focal length?**

As the ciliary muscles around the eye contract, the curvature of lens increases and focal length decreases. When the ciliary muscles are relaxed the curvature of lens decreases and focal length increases. Thus by the contraction and relaxation of the ciliary muscles, the focal length is adjusted and clear images of near and far objects are formed on retina.

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The ability of the eye to form an image on the retina by adjusting the focal length of the lens in the eye, by varying the curvature of the lens, irrespective of the position of the object, is the **power of accommodation**.
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