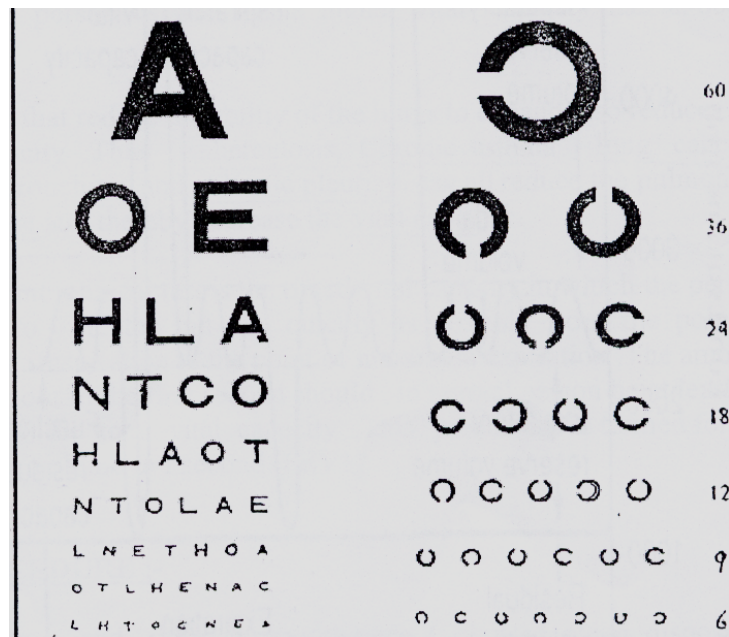


# 13-Visual acuity

## Introduction:

Visual acuity is the shortest distance by which two lines can be separated and still be perceived as two lines. It is measured by using **Snellen's test type**, which is a series of letters of different sizes, the top letter is visible to the normal eye at 60 m., and the subsequent lines at 36, 24, 18, 12, 9 and 6 m. respectively. The letters are in lines, each line has types of same size. The top row of types contains large letters and succeeding rows contain gradually smaller and smaller letters, **figure (19)**.



**Figure (19):** Snell's chart.

$$V = d / D$$

V = Visual acuity.

d = distance of from the type (6 meters).

D = distance at which the eye should be capable to read it clearly.

## Hyperopia (farsightedness):

The eye ball is shorter than normal one; the rays of light are brought to focus behind the retina. The defect can be corrected by using glasses with convex lenses.

## Myopia (nearsightedness):

The antero-posterior diameter of the eye ball is too long. Myopia is said to be genetic in origin. In young adult humans the extensive close work involved in activities such as studying accelerates the development of myopia. This defect can be corrected by glasses with biconcave lenses, **figure (20)**.

**Objective:** To examine the visual acuity of eyes.

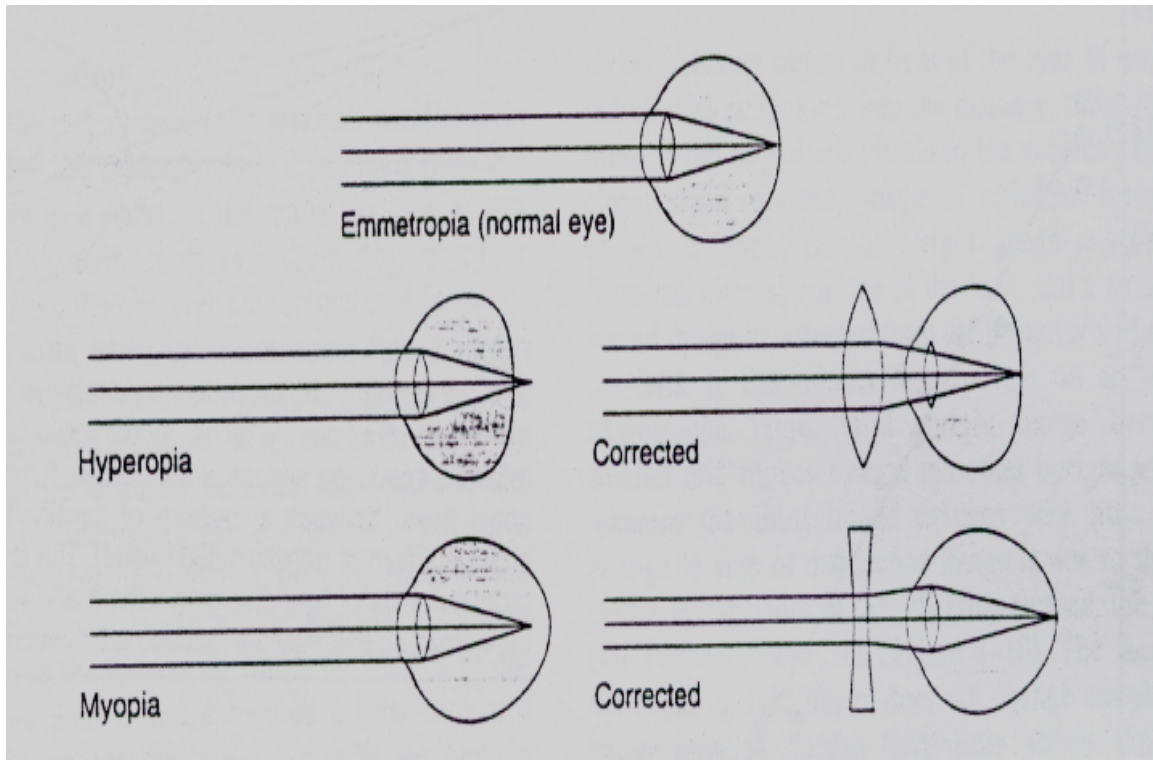
## **Subjects and instruments:**

1- Subjects.

2- Snellen's letter chart.

**Methods:**

- 1- The subject is placed at a distance of six meters from the test types (chart).
- 2- Each eye is tested separately.
- 3- Normal person should be able to read lines (6/6).
- 4- If visual acuity of person is less than 6/60, it is recorded as:
  - a- Counting finger (CF).
  - b- Hand movement (HM).
  - c- Perception of light (PL).
  - d- No perception of light (no PL).
- 5- If the subject wears glasses, test eyes with and without them.



**Figure (18):** Hyperopia and myopia.