- Had no history of orthodontic treatment or space maintenance therapy.

Children selected were made to sit comfortably on the dental chair and impressions of both the arches were made, casts prepared and grouped accordingly.

Cast measurement: Arch length was measured as the distance between the contact point of the incisors to the line tangent to the cusp tip of the canines, distal surfaces of the deciduous first molars, second molars and the permanent first molars using Karkhaus callipers (Fig.1).

The arch lengths were thus observed at 4 regions:
A- arch length at canine region
B- arch length at deciduous 1st molar region
C- arch length at deciduous 2nd molar region
D- arch length at permanent first molar region

The arch length between children with and without premature loss of deciduous molars were compared and statistical analysis was carried out using student 't' test.

RESULTS
Non Extraction Group

The arch length at A,B,C&D were found to be 10.14 (±1.55) mm, 20.86 (±1.97) mm, 29.89 (±3.61) mm and 39.75 (±1.45) mm, respectively in the maxilla and 6.78 (±1.45) mm 16.97 (±1.46) mm, 26.57 (±1.55) mm, 35.68 (±1.78) mm respectively in the mandible.

Maxilla (Table 1)
First molar missing:
The arch length at A was 10.41 (±1.38) mm, C was 27.32 (±1.23) mm, and D was 38.64 (±1.25) mm.

Second molar missing:
The arch length at A was 10.45 (±1.12) mm, B was 21.20 (±1.74) mm, and at D was 37.70 (±1.11) mm.

First and second molar missing:
The arch length at A was 10.39 (±0.6) mm, and at D was 37.17 (±1.07) mm.

Mandible (Table 2)
First molar missing:
The arch length at A was 7.81 (±0.80) mm, C was 26.10 (±0.64) mm, and at D was 35.28 (±1.15) mm.

Second molar missing:
The arch length at A was 7.28 (±0.68) mm, B was 17.90 (±0.58) mm, and at D was 34.45 (±0.61) mm.

First and second molar missing:
The arch length at A was 7.75 (±0.86) mm, and at D was 34.30 (±1.32) mm.

DISCUSSION
A tooth is maintained in its correct relationship in the dental arch as a result of the action of a series of forces. If one of these forces is altered or removed, changes in the relationship will occur and result in drifting of teeth.

The actual mechanism of tooth drifting is not clearly understood. According to Tencate the factors which may bring about this drifting are occlusal force, ligament contraction and soft tissue pressure. Picton studied the tooth migration in man and other mammals and concluded that “drift occurs when a sustained disturbance is produced in the balance of forces acting on a tooth and will continue until a new balance is established”.

The space closure can occur by mesial or distal drifting or by combination. Clinch et al., Seipel and McBride found that there was little mesial drifting of the lower molars and majority of the space closed by distal movement of canines, while Hoffding et al. found that space in the mandible was lost by both mesial and distal migration of adjacent teeth. There was an unanimous finding regarding the direction of space closure in maxilla, where the space closed primarily by mesial movement of the teeth distal to the space.