

## CHAPTER I

### INTRODUCTION



In [1] and [2], P.C. Kainen defines the skewness of a graph  $G$ , denoted by  $\mu(G)$ , to be the minimum number of edges whose removal from  $G$  makes the resulting graph embeddable in the sphere and has shown that for  $k \geq 3$  every graph  $G$  with  $\mu(G) < \binom{k}{2}$ , has chromatic number at most  $k + 2$ .

In this study we generalize the concept of skewness of a graph  $G$  and find a similar relationship between our generalized skewness and the chromatic numbers. The main results are given in Theorem 4.3.

To make this study self contained, necessary concepts from topology and graph theory are provided in Chapter II and Chapter III.