

**Title:** Some Skolem square difference mean graphs

**Author(s):**

Indirani K

Thilagavathi R

Shiama J

**Speaking Author:** Author 1

**Email:** [indirani009@ymail.com](mailto:indirani009@ymail.com)

**Abstract:**

In this paper, the new concept Skolem square difference mean labeling has been introduced and a formula for Skolem square difference mean labeling has been established. If  $f$  is a bijective function from the vertices of  $G$  to the set  $\{1, 2, \dots, p\}$  such that when each edge  $uv$  is assigned the label  $f$  if  $|(f(u)) - (f(v))|^2$  is even and if  $|(f(u))^2 - (f(v))^2|$  is odd, then the resulting edge labels are distinct ranges from 2 to  $p$ . The function  $f$  is called Skolem square difference labeling of a graph  $G$  with  $q$  edges. A graph that admits Skolem square difference mean labeling is called the Skolem square difference mean graph. It is proved that the star  $k_{1,n}$ , path  $P_n$ , cycle  $C_n$ , cycle with one chord, the graph obtained by the subdivision of the edges of  $k_{1,n}$ , bistar  $B(n,n)$ , banana tree  $BT(n_1, n_2, \dots, n_k)$  are Skolem square difference mean graphs.