

FOR SCALAR k AND VECTOR V , kV IS THE VECTOR IN THE DIRECTION OF V WITH LENGTH k TIMES THE LENGTH OF V IF $k > 0$ AND THE VECTOR IN THE OPPOSITE DIRECTION OF V WITH LENGTH k TIME THE LENGTH OF V IF $k < 0$. IF $k = 0$, THEN kV IS THE 0 VECTOR.

THE COMPONENTS OF V ARE THE COORDINATES OF THE TERMINAL POINT OF V WHEN ITS INITIAL POINT IS MOVED TO THE ORIGIN.

PLEASE CONSULT THE TEXT FOR DETAILS ON CALCULATING $V+W$, $V-W$ AND kV IN TERMS OF COMPONENTS.