

SUMMARY OF SECTION 3.1

A VECTOR IS (GEOMETRICALLY) A DIRECTED LINE SEGMENT IN 2 DIMENSIONS OR 3 DIMENSIONS. THE TAIL IS CALLED THE INITIAL POINT, WHILE THE TIP IS CALLED THE TERMINAL POINT.

IF THE INITIAL POINT IS A AND THE TERMINAL POINT IS B WE WRITE \overrightarrow{AB} .

TWO VECTORS ARE EQUIVALENT (IE REGARDED AS EQUAL) IF THEY HAVE THE SAME LENGTH AND DIRECTION.

THE SUM OF TWO VECTORS V AND W (GEOMETRICALLY) IS OBTAINED BY POSITIONING W SO THAT ITS INITIAL POINT COINCIDES WITH V 'S TERMINAL POINT. THE SUM THEN HAS THE INITIAL POINT OF V AND THE TERMINAL POINT OF W .

THE ZERO VECTOR IS THE VECTOR OF LENGTH 0. $-V$ IS THE VECTOR WITH THE SAME LENGTH AS V , IN THE OPPOSITE DIRECTION OF V .

BY DEFINITION $V - W = V + (-W)$. PUT THE INITIAL POINTS TOGETHER & GO FROM TERM. W TO TERM. V .