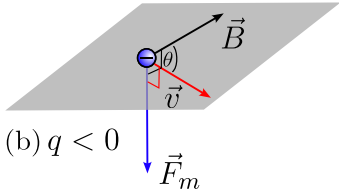


(a)  $q > 0$



(b)  $q < 0$