

## PROBLEM 8

Let  $H$  be a normal subgroup of  $G$  and let  $a$  belong to  $G$ . If the element  $aH$  has order 3 in the group  $G/H$  and  $|H| = 10$ , what are the possibilities for the order of  $a$ ?

## SOLUTION TO PROBLEM 8

3,6,15,30