1. $g^3 - 6g^2 + 11g - 6$ has a factor $(g-1)$ compute all other factors:

$(g - 3)(g - 1)(g + 2)$

$(g - 3)^3$

$(g - 3)(g - 2)(g - 1)$

$(g - 3)^2(g + 2)$

Solution
Apply Long Division.
$(g - 3)(g - 2)(g - 1)$