4. $k^3 + 7k^2 + 12k$ has a factor $(k-(-4))$ compute all other factors:

$(k-1)\ k\ (k+3)$

$(k+1)\ (k+3)^2$

$k\ (k+3)\ (k+4)$

$(k-1)\ (k+3)^2$

Solution
Apply Long Division.
$k\ (k+3)\ (k+4)$