2. $a^3 + 6a^2 + 5a - 12$ has a factor $(a-(-4))$ compute all other factors:

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

$(a-4) (a+3)^2$

$(a-1) (a+3) (a+4)$

$(a-4) (a-3) (a+3)$

Solution
Apply Long Division.
$(a-1) (a+3) (a+4)$