1. $t^3 + 5t^2 + 8t + 4$ has a factor $(t - (-2))$ compute all other factors:

$t^2 (t + 1)$

$(t + 1) (t + 4)^2$

$(t + 1) (t + 2)^2$

$t (t + 1)^2$

Solution
Apply Long Division.
$(t + 1) (t + 2)^2$