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

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

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

$(t - 3) (t + 1)^2$

$t^2 (t + 1)$

Solution
Apply Long Division.
$(t - 3) (t + 1)^2$