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

$(t-4)(t-2)t$

$(t-4)(t-2)(t-1)$

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

$(t-2)^3$

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