1. $m^3 + 6m^2 + 8m$ has a factor $(m - (-4))$ compute all other factors:

$m^2 (m + 2)$

$(m - 3) (m + 1) (m + 2)$

$m (m + 2) (m + 4)$

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

Solution
Apply Long Division.
$m (m + 2) (m + 4)$