4. $e^3 + 3e^2 - 16e - 48$ has a factor $(e - (-4))$ compute all other factors:

$(e - 4)^2 e$

$(e - 4)(e + 2)(e + 4)$

$(e - 4)(e + 3)(e + 4)$

$(e - 4)(e - 1)(e + 4)$

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