5. $f^3 + 10 f^2 + 32 f + 32$ has a factor $(f - (-4))$ compute all other factors:

$(f - 4)(f + 4)^2$

$(f - 4)(f - 3)(f + 4)$

$(f + 2)(f + 4)^2$

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

Solution
Apply Long Division.
$(f + 2)(f + 4)^2$