5. $u^3 - 11u^2 + 40u - 48$ has a factor $(u-3)$ compute all other factors:

$(u - 3)^2 (u + 4)$

$(u - 3) u (u + 1)$

$(u - 4)^2 (u - 3)$

$(u - 3)^2 u$

**Solution**
Apply Long Division.
$(u - 4)^2 (u - 3)$