1.
$$m^3 - 6 m^2 + 5 m + 12$$
 has a factor $(m - (-1))$ compute all other factors: $(m-3) m^2$ $(m-3) (m-2) (m-1)$ $(m-4) (m-3) (m+1)$ $(m-3) (m-2) (m+4)$ Solution Apply Long Division. $(m-4) (m-3) (m-3) (m+1)$