5. $x^3 + x^2 - 14x - 24$ has a factor $(x - (-3))$ compute all other factors:

$(x - 3)(x + 2)(x + 3)$

$x(x + 1)(x + 3)$

$(x - 4)(x + 2)(x + 3)$

$(x - 4)(x - 2)(x + 3)$

Solution
Apply Long Division.
$(x - 4)(x + 2)(x + 3)$