3) (5 pts) ANL (Recurrence Relations)

Using the iteration technique, just solve for the **next two** iterations of the following recurrence relation:

$$T(n) = 3T(n-1) + n^2, for\ integers\ n > 0$$
$$T(0) = 1$$

Your answers should be of the form

$T(n) = aT(n-2) + bn^2 - cn + d$ and
$T(n) = eT(n-3) + fn^2 - gn + h$, where *a*, *b*, *c*, *d*, *e*, *f*, *g*, and *h* are positive integers.