# Answers homework 13

1. Constraints

   $A_{0,1} = 0$

   $\forall 1 >= i <= 7 : A_{i,1} - A_{i-1,1} - 2 = 0$

   $A_{7,2} = 12$

2. a) $p(x) = x^3 - 5x^2 - 4x + 20$ has a root when x = 5

   b) $p(x) = (x - a)q(x)$
   here a = 5 so
   $p(x) = (x - 5)q(x)$
   $= (x - 5)(x^2 - 4)$

   which can be simplified further to

   $(x - 5)(x - 2)(x + 2)$