(a) The degree of sequence A should be equal a – 1. According to the question A\*A = B, so the degree of B should be equal 2(a-1) + 1. The answer should be b = 2a -1.

(b) According to the question, we know the degree of sequence B is 4, so get the degree of sequence A should be 2. Then we can get the length of A is 3. Assume the sequence . For the associated polynomial is , thus the convolution of A with itself is the sequence of the coefficients of the polynomial

We know a^2 = 4, so we can get a = 2,-2

When a = 2:

We can get the sequence A = <2,1,-1>

When a = -2:

We can get the sequence A = <-2,-1,1>