Boone Tison

Homework 12.1 #2

2 a:

Alphabet is x and y. Length is <= 3. All x’s appears to left of all y’s.

L3 = {ε, x, y, xx, xy, yy, xxx, xxy, xyy, yyy}

2 b:

Alphabet is x and y. Length is = 4.

L = {xxxx, xxxy, xxyx, xxyy, xyxx, xyxy, xyyx, xyyy, yxxx, yxxy, yxyx, yxyy, yyxx, yyxy, yyyx, yyyy}

2 c:

Alphabet is x and y. A is the union of length 1 and 2. B is the union of length 3 and 4.

A contains all strings of length 1 and length 2 over Σ

B contains all strings of length 3 and length 4 over Σ

A u B contains all strings of length 1, 2, 3, 4 over Σ