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**ICS 3B**

**EXERCISE 3.1**

**Let L1 = { x, xy, x2 }, L2 = { y2 , xyz } be language of ∑ = { x, y }. Find:**

**1. L1 ⋃ L2**

1. L1 U L2 = {x, xy, x2 , y2, xyz}

**2. L1 ◦ L2**

1. L1 . L2 = {xy2, xy3, x2y2, x2yz, x2y2z, x3yz}

**3. L \* 1**

1. L1\* = {(λ), x, xy, x2, x2y,x3,x3y, yx3, yx2,xx,x2y2}
2. L2\* = {(λ), y2, xyz, xy3z, y4,zxy,yxz}
3. L1 x L2 = {(x,y2), (x,xyz), (xy,y2), (xy,xyz), (x2,y2),(x2,xyz)}