**CS 260 – Homework #6**

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**Problem 1 (5.7 from text)**

Show the 2-3 tree that results if we insert into an empty set, represented

as a 2-3 tree, the elements 5, 2, 7, 0, 3, 4, 6, 1, 8, 9.

**Solution**

Insert 5:

5

Insert 2:

2 | 5

Insert 7:

5

2

7

Insert 0:

5

0 | 2

7

Insert 3:

2 | 5

0

3

7

Insert 4:

2 | 5

0

3 | 4

7

Insert 6:

2 | 5

0

3 | 4

6 | 7

Insert 1:

2 | 5

0 | 1

3 | 4

6 | 7

Insert 8:

5

2

7

0 | 1

3 | 4

6

8

Insert 9:

5

2

7

0 | 1

3 | 4

6

8 | 9

Done.

**Problem 2 (5.8 from text)**

Show the result of deleting 3 from the 2-3 tree that results from Exercise

5.7

**Solution**

5

2

7

0 | 1

4

6

8 | 9