HOMEWORK MATH 4140

1. Homework (due Thursday, February 9)

Page 366: 4, 9, 10, 11, 12, 15.

2. Homework (due Thursday, February 16)

Page 384: 3, 4, 5, 10, 11, 12(a, b, c), 14, 15.

3. Homework (due Thursday, February 23)

Page 409: 10, 20, 21, 23. Page 410: 16, 17.

In addition, solve also the following problem: Consider the set $\mathcal{S}$ of all the points in the plane of coordinates $(x, \sin(1/x))$ for $x \in (0, 1]$. Then, take the closure of it $\overline{\mathcal{S}}$ and show that this closed set, viewed as a metric space with the topology induced from $\mathbb{R}^2$, is connected but not arcwise connected.

4. Homework (due Thursday, March 9)

Page 435: 1, 3, 4, 6, 7, 8, 10, 15, 16.

5. Homework (due Thursday, March 16)

Page 452: 4, 9, 10, 15, 17, 18.

6. Homework (due Thursday, March 23)

Page 452: 11, 14. Page 483: 1,2.

7. Homework (due Thursday, April 20)

Page 483: 4, 5. Page 529: 6, 7, 21.

8. Homework (due Thursday, April 27)

Page 559: 1, 4, 6, 11, 12. Page 580: 7(a).

9. Homework (due Thursday, May 4)

Page 600: 5, 8, 9, 10, 12.