

## Homework and starred items

2.6: 6.1, 6.3, 6.4, 6.6, 6.7, 6.9, 6.11(a-e).

2.7: 7.1, 7.3, 7.4, 7.6, 7.7 (b,c,f,g), 7.13, 7.14

(★) 2.7 Theorem 7.15, 7.17 cases (a) and (b).

2.8:8.1.

3.10: 10.3, 10.7, 10.18.

3.11: 11.4, 11.6, 11.7, 11.10.

(★) Thm. 11.7.

3.12: 12.1, 12.2, 12.3, 12.4.

Show that  $\mathbb{C}$  is a field.

(★)  $[0,1]$  is uncountable.

(★) Thm.14 (12.10 and 12.12).

3.13: 13.1, 13.2, 13.3 (a,c), 13.4 (a,c), 13.5 (a,b,c,d), 13.6 (a,b,c,d), 13.7, 13.11, 13.19.

(★) Thm. 13.10, 13.11.

3.14: 14.1, 14.3. Prove that if  $E$  is a finite subset of  $\mathbb{R}$  then  $E$  is compact.

4.16: 1, 16.2, 16.4, 16.6 (a,c), 16.7 (a, b, c, d), 16.8, 16.10.

(★) Thm. 16.13, 16.14.

4.17: 17.1, 17.2, 17.4 (b), 17.5, 17.8, 17.16.

4.18: 18.1, 18.2, 18.3 (a, b, d), 18.5, 18.10, 18.11, 18.13.

(★) MCT, Thm.18.10

4.19: 19.1, 19.3, 19.4, 19.5, 19.9, 19.11.