

MAT157 – ANALYSIS I, 2018–19. ASSIGNMENT 4 $\frac{1}{2}$.

Recommended problems from Chapter 6 of Spivak’s book – do not hand in:

- Spivak Chapter 6 Question 1. (Which functions extend continuously to \mathbb{R} .)
- Spivak Chapter 6 Question 2. 4–17: (i), (ii), (iii), (iv). 4–19: (i), (ii), (iv), (vi). (Find points of continuity.)
- Spivak Chapter 6 Question 3 (a), (b). (Sandwich argument.)
- Spivak Chapter 6 Question 6 (a), (b). (Build discontinuities at $\{\frac{1}{n}\}$ or at $\{\frac{1}{n}\} \cup \{0\}$.)
- Spivak Chapter 6 Question 10 (b), (c). (Continuity of even/odd parts.)
- Spivak Chapter 6 Question 14 (b). (The “pasting lemma”.)
- Spivak Chapter 6 Question 15. (Continuous implies locally small variation.)
- Spivak Chapter 6 Question 16. (Right/left continuous implies same sign nearby.)